

| Thursday / June 30th                 |  |   |                             |
|--------------------------------------|--|---|-----------------------------|
| 8:30-                                | Registration (in front of meeting room at 5th floor)                         |   |                             |
| <b>Room A (5F, meeting room)</b>     |  | <b>Room B (4F, seminar room B,C)</b>                  |                             |
| 9:25-9:30                            | Opening ceremony<br><i>Chair: Prof. Atsushi Fukuoka</i>                      |   |                             |
| 9:30-10:20                           | PL-1 Prof. Xinhao Bao  |   |                             |
| 10:20-10:40                          | Coffee break<br><i>Chair: Prof. Friedrike Jentoft, Prof. Kenichi Shimizu</i> |   |                             |
| 10:40-11:10                          | IL-1 Prof. Ichiro Yamanaka   | 10:40-11:00   | OB-01 Dr. Ryoichi Otomo     |
| 11:10-11:30                          | OA-01 Dr. Kohsuke Mori   | 11:00-11:20   | OB-02 Dr. Asep Bayu         |
| 11:30-11:50                          | OA-02 Prof. Shengjun Huang   | 11:20-11:50   | IL-2 Prof. Stuart Taylor    |
| 11:50-13:30                          | Lunch<br><i>Chair: Prof. Bunsho Ohtani</i>                                   |   |                             |
| 13:30-14:20                          | PL-2 Prof. Koichi Eguchi   |   |                             |
| 14:20-14:40                          | Coffee break<br><i>Chair: Prof. Ichiro Yamanaka, Dr. Ewa Kowalska</i>        |   |                             |
| 14:40-15:00                          | OA-03 Dr. Atthapon Srifa   | 14:40-15:10   | IL-3 Dr. Evgeny Pidko       |
| 15:00-15:20                          | OA-04 Dr. Toshiyuki Yokoi  | 15:10-15:30   | OB-03 Dr. Sho Yamaguchi     |
| 15:20-15:40                          | OA-05 Dr. Osamu Tomita   | 15:30-15:50   | OB-04 Dr. Ken Motokura      |
| 15:40-16:00                          | OA-06 Dr. Tomohiro Higashi   | 16:00-16:30   | IL-4 Dr. Shinji Inagaki     |
| 16:30-18:00                          | Poster Session (2F, Science Plaza)   |   |                             |
| 18:20-                               | Banquet (1F, Popula)   |   |                             |
| Friday / July 1st                    |  |   |                             |
| 8:30 -                               | Registration (in front of meeting room at 5th floor)                         |   |                             |
| <b>Room A (5F, meeting room)</b>     |  | <b>Room B (4F, seminar room B,C)</b>                  |                             |
| <i>Chair: Prof. Jorge Beltramini</i> |  |   |                             |
| 9:00-9:50                            | PL-3 Prof. Bert F. Sels  |   |                             |
| 9:50-10:10                           | Coffee break<br><i>Chair: Dr. Evgeny A. Pidko, Dr. Kohsuke Mori</i>          |   |                             |
| 10:10-10:40                          | IL-5 Dr. Roberto Rinaldi   | <i>Chair: Prof. Yuichi Kamiya, Dr. Junko N. Kondo</i> |                             |
| 10:40-11:00                          | OA-07 Prof. Jorge Beltramini   | 10:40-11:10   | IL-6 Dr. Yoshihide Watanabe |
| 11:10-11:40                          | IL-7 Dr. Carsten Sievers   | 11:10-11:30   | OB-05 Dr. Yasuharu Kanda    |
| 11:40-12:10                          | IL-8 Prof. Friederike C. Jentoft   | 11:30-11:50   | OB-06 Prof. Naonobu Katada  |
| 12:10-13:40                          | Lunch<br><i>Chair: Prof. Shengjun Huang, Dr. Roberto Rinaldi</i>             |   |                             |
| 13:40-14:00                          | OA-08 Dr. Abhijit Shrotri  | 13:40-14:10   | IL-9 Dr. Jens S. Hummelshøj |
| 14:00-14:20                          | Cancelled  | 14:10-14:30   | OB-08 Dr. Akira Nakayama    |
| 14:20-14:40                          | OA-10 Dr. Rodiansono   |   |                             |
| 14:40-15:00                          | OA-11 Dr. Sarwat Iqbal   |   |                             |
| 15:00-15:20                          | OA-12 Dr. Atsushi Takagaki   |   |                             |
| 15:20-15:40                          | OA-13 Dr. Tasuku Komanoya  |   |                             |
| 15:40-                               | Closing remarks  |   |                             |

## Oral program

PL: 45 min presentation, 5 min discussion

IL: 25 min presentation, 5 min discussion

OA, OB: 15 min presentation, 5 min discussion

### June 30 / Room A

9:25 - 9:30 Opening ceremony

*9:30 - 10:20 Chair: Prof. Atsushi Fukuoka*

9:30 - 10:20 **PL-1 Prof. Xinhe Bao**

Direct conversion of C1 molecules to high value chemicals

10:20 - 10:40 Coffee break

*10:40 - 11:50 Chair: Prof. Friedrike Jentoft, Prof. Kenichi Shimizu*

10:40 - 11:10 **IL-1 Prof. Ichiro Yamanaka**

Development of new catalysts for dehydrogenative conversion of methane to higher hydrocarbons

11:10 - 11:30 **OA-01 Dr. Kohsuke Mori**

Development of Nano-Catalysts for Efficient Hydrogen Production from Energy Storage Materials

11:30 - 11:50 **OA-02 Prof. Shengjun Huang**

Toward a Flexible Post-Synthesis of Hierarchical MFI Zeolites

11:50 - 13:30 Lunch

*13:30 - 14:20 Chair: Prof. Bunsho Ohtani*

13:30 - 14:20 **PL-2 Prof. Koichi Eguchi**

Ammonia as an energy carrier and related catalysis

14:20 - 14:40 Coffee break

*14:40 - 16:00 Chair: Prof. Ichiro Yamanaka, Dr. Ewa Kowalska*

14:40 - 15:00 **OA-03 Dr. Atthapon Srifa**

CO<sub>x</sub>-free hydrogen production via ammonia decomposition over molybdenum nitride-based catalysts

15:00 - 15:20 **OA-04 Dr. Toshiyuki Yokoi**

Direct conversion Methane to Methanol over Zeolite catalyst / H<sub>2</sub>O<sub>2</sub> system

15:20 - 15:40 **OA-05 Dr. Osamu Tomita**

Manganese-substituted-polyoxometalate as an Effective Shuttle Redox Mediator in Z-scheme Water Splitting into H<sub>2</sub> and O<sub>2</sub> under Visible Light

15:40 - 16:00 **OA-06 Dr. Tomohiro Higashi**  
Overall Water Splitting by Photoelectrochemical Cell Composed of  $\text{La}_5\text{Ti}_2(\text{Cu,Ag})\text{S}_5\text{O}_7$   
Photocathode and  $\text{BaTaO}_2\text{N}$  Photoanode under Simulated Sunlight

## June 30 / Room B

*10:40 - 11:50 Chair: Dr. Carsten Sievers, Dr. Ken Motokura*

10:40 - 11:00 **OB-01 Dr. Ryoichi Otomo**  
Modification of Acidic/Basic Properties of Sn-Beta with Cations as Catalyst for Baeyer-Villiger Oxidation with  $\text{H}_2\text{O}_2$

11:00 - 11:20 **OB-02 Dr. Asep Bayu**  
Preparation of Sn- $\beta$ -Zeolite via Immobilization of Sn/ChCl Complexes as a Highly Active Solid Catalyst for Glucose-Fructose Isomerization Reactions

11:20 - 11:50 **IL-2 Prof. Stuart Taylor**  
Catalytic selective oxidation of biobutanol using supported metal nanoparticles

11:50 - 13:30 Lunch

*14:40 - 16:30 Chair: Prof. Bert F. Sels, Dr. Atsushi Takagaki*

14:40 - 15:10 **IL-3 Dr. Evgeny Pidko**  
Rational design of catalytic processes for  $\text{CO}_2$  valorization: from theory to devices

15:10 - 15:30 **OB-03 Dr. Sho Yamaguchi**  
Tin-catalyzed cascade synthesis of five-membered lactones using biomass-derived sugars as carbon nucleophiles

15:30 - 15:50 **OB-04 Dr. Ken Motokura**  
Rh Complex and Tertiary Amine Immobilized on a Same  $\text{SiO}_2$  Surface: Heterogeneous Double-Activation Catalysis and Estimation of Active Site Distance Using a Probe Molecule

15:50 - 16:00 Break

16:00 - 16:30 **IL-4 Dr. Shinji Inagaki**  
Mesoporous organosilica chelating ligand for heterogeneous metal complex catalysis

## July 1 / Room A

*9:00 - 9:50 Chair: Prof. Jorge Beltramini*

9:00 - 9:50 **PL-3 Prof. Bert F. Sels**  
The role of heterogeneous catalysis in liquid phase processing of lignocellulose

9:50 - 10:10 Coffee break

*10:10 - 12:10 Chair: Dr. Evgeny A. Pidko, Dr. Kohsuke Mori*

10:10 - 10:40 **IL-5 Dr. Roberto Rinaldi**

What is the best way to start lignin conversion strategies: From lignocellulose or pulping (lignin) waste?

10:40 - 11:00 **OA-07 Prof. Jorge Beltramini**

Effect of synthesis conditions, promoter and support on the catalytic hydrodeoxygenation of model lignin compounds over supported MoS<sub>2</sub> based catalysts

11:00 - 11:10 Break

11:10 - 11:40 **IL-7 Dr. Carsten Sievers**

Ceria-based catalysts for hydrodeoxygenation of bio-oils and selective oxidation of methane

11:40 - 12:10 **IL-8 Prof. Friederike C. Jentoft**

Heterogeneously catalyzed single-step conversion of glycols to olefins

12:10 - 13:40 Lunch

*13:40 - 15:40 Chair: Prof. Shengjun Huang, Dr. Roberto Rinaldi*

13:40 - 14:00 **OA-08 Dr. Abhijit Shrotri**

Conversion of lignocellulosic biomass to monomeric sugars in a high-pressure slurry flow reactor with oxygenated carbon catalyst

14:00 - 14:20 Cancelled

14:20 - 14:40 **OA-10 Dr. Rodiansono**

Highly Selective Hydrogenation of Furfural over Novel Ni-In Alloy Supported on Aluminium Hydroxide

14:40 - 15:00 **OA-11 Dr. Sarwat Iqbal**

The conversion of levulinic acid into  $\gamma$ -valerolactone using Cu-ZrO<sub>2</sub> catalysts

15:00 - 15:20 **OA-12 Dr. Atsushi Takagaki**

Kinetic analysis of cyclodehydration of 1,4-diols over a layered niobium molybdate solid acid

15:20 - 15:40 **OA-13 Dr. Tasuku Komanoya**

One-pot conversion of glycerol to lactic acid over Pt nanoparticles-TiO<sub>2</sub> combined catalysts

15:40 - Closing remarks

## July 1 / Room B

*10:40 - 12:10 Chair: Prof. Yuichi Kamiya, Dr. Junko N. Kondo*

10:40 - 11:10 **IL-6 Dr. Yoshihide Watanabe**

New aspect of metal-support interaction unraveled by atomic-scale analysis

11:10 - 11:30 **OB-05 Dr. Yasuharu Kanda**

Low temperature synthesis of noble metal phosphides catalysts using triphenylphosphine as a phosphorus source

11:30 - 11:50 **OB-06 Prof. Naonobu Katada**

Methane as methylating agent on Co/MFI zeolite catalyst

11:50 - 12:10 **OB-07 Dr. Zen Maeno**

Highly Efficient Depolymerization of Polyethers with Carboxylic Acid Derivatives to Glycol Diesters Using Heterogeneous Montmorillonite Catalyst

12:10 - 13:40 Lunch

*13:40 - 14:30 Chair: Prof. Mayumi Nishida*

13:40 - 14:10 **IL-9 Dr. Jens S. Hummelshøj**

Catalysis data warehouse

14:10 - 14:30 **OB-08 Dr. Akira Nakayama**

First-Principles Simulations of Catalytic Reactions at the Water/CeO<sub>2</sub>(111) Interface: Role of the Acid-Base Sites

## Poster program

- P-01 **Weiwei Yang**  
Preparation of highly stable supported Ni catalysts and their catalytic performance in carbon dioxide reforming of methane
- P-02 **Mayumi Nishida**  
Reverse Water Gas Shift Reaction Using SILP Catalyst
- P-03 **Yuththaphan Phongboonchoo**  
Ce-Mg promoted copper-based catalysts for hydrogen production via methanol steam reforming
- P-04 **Qiuyi Yuan**  
A PTRF-XAFS Investigation of the Structure of the Pt Monolayer Prepared by Surface Limited Redox Reaction
- P-05 **Kenta Kobayashi**  
Facet-selective Deposition of Metal Particles on Decahedral-shaped Titania Photocatalyst Particles
- P-06 **Daiki Kido**  
Ultrafast XAFS Studies of  $WO_3$  during the Photoexcited Process
- P-07 **Kunlei Wang**  
Influence of Platinum-loading Amount on Photocatalytic Activity of Titania Particles Prepared from Evonik P25
- P-08 **Haruna Hori**  
Kinetic Study on Two-electron Transfer in Photocatalytic Oxidative Decomposition of Organic Compounds by Hydrothermally Prepared Bismuth Tungstate
- P-09 **Zhishun Wei**  
Noble Metal-modified Octahedral Anatase Titania Particles with Enhanced Photocatalytic Activity for Decomposition of Chemical and Microbiological Pollutants
- P-10 **Sayaka Misu**  
Low temperature synthesis of reduced titanium oxide  $Ti_2O_3$  by the reduction of  $TiO_2$  with  $TiH_2$
- P-11 **Hiroko Ariga**  
Direct measurements of oxygen vacancy in  $TiO_2$  single crystal
- P-12 **Hassan Nageh**  
Synthesis and Solid-state Structure of  $\pi$ -Stacked Poly(dibenzofulvene)
- P-13 **Hiroki Nakata**  
Synthesis of Titanacyclopentene by Using 1,2-Dibromoethane as New C2 Source
- P-14 **Yue Wang**  
Chirality Induction to a Star-shaped Polyfluorene Derivative Using Circularly Polarized Light

- P-15 **Akihiro Kimura**  
Synthesis and Performance of Polyurethane-Based Catalyst for Direct Borylation of Aromatic Compounds
- P-16 **Masayoshi Bando**  
Construction of Novel Carbon Skeleton from Titanacyclopentadiene
- P-17 **Nobuhiro Ishito**  
Synthesis of Ru-immobilized bipyridine containing periodic mesoporous organosilica and application for selective oxidation of alkanes
- P-18 Cancelled
- P-19 **Shuhei Yasuda**  
Role of water vapor in the selective oxidation of methacrolein over 12-molybdophosphoric acid catalyst
- P-20 **Ken-ichi Shimizu**  
Reductive transformations of CO<sub>2</sub>, carboxylic acids and amides into chemicals
- P-21 **Hiromi Matsuhashi**  
Synthesis of Mayenite (C12A7) with High Surface Area and Application to Base Catalyzed Retro-Aldol Reaction of Diacetone Alcohol
- P-22 **Md. Ayub Ali**  
Development of Efficient Catalytic Processes for Synthesis of Imides and Amides Utilizing Nb<sub>2</sub>O<sub>5</sub> Catalysts
- P-23 **Yusuke Kita**  
Lewis Acid-catalyzed Amide Bond Cleavage reaction
- P-24 **Takashi Toyao**  
Conversion of Amides to Esters by Utilizing a Reusable CeO<sub>2</sub> Catalyst
- P-25 **Nobutaka Yamanaka**  
Chemoselective hydrogenation of unsaturated nitro compounds to unsaturated amines by Ni-Sn alloy catalysts
- P-26 **Sodomoyee Konika Moromi**  
Acceptorless Dehydrogenation Reactions Catalyzed by Supported Pt Catalysts
- P-27 **Natsumi Hasegawa**  
Cracking reaction of heavy oil catalyzed by TiO<sub>2</sub>-ZrO<sub>2</sub> complexes under superheated steam condition
- P-28 **Satoshi Sugauma**  
Influence of acidic properties of solid catalysts on dehydration of glycerol
- P-29 **Haruka Yokoyama**  
Dehydration of sorbitol to isosorbide over \*BEA zeolite

- P-30 **Ting-cih Kang**  
Hydrogen Peroxide-Assisted Liquid Phase Oxidation of 5-Hydroxymethylfurfural (HMF) in Aqueous System
- P-31 **Jose L. Contreras Mora**  
Evaluation and Characterization of Carbon-Supported Nobel Metals for the Hydrodeoxygenation (HDO) of Acetic Acid
- P-32 **Daolai Sun**  
Vapor-phase lactonization of levulinic acid into angelicalactones
- P-33 **Satoshi Seki**  
Unusual loading-dependence of Au nanoparticle size in the O<sub>2</sub> plasma preparation method
- P-34 **Taichi Shirobe**  
A Mixed-Solvent Approach to Delaminate Lamellar Precursors of MWW-type Molecular Sieves
- P-35 **Michiko Kitagawa**  
HCl removal from a vapor phase using MgO prepared by short-time thermal decomposition of Mg(OH)<sub>2</sub>
- P-36 **Naoki Nakatani**  
Geometry and electronic structures of iron-sulfur clusters: A theoretical study on the basis of density matrix renormalization group
- P-37 **Ray Miyazaki**  
Mechanism of ethylene oxidation by Pt catalyst supported on mesoporous silica: a theoretical study
- P-38 **Jun-ya Hasegawa**  
Coupling Reaction of CO<sub>2</sub> and Epoxide for Cyclic Carbonate Synthesis by Bifunctional Porphyrin Catalysts: a Theoretical Study
- P-39 **K-jiro Watanabe**  
Theoretical study of the reaction pathway via intersystem crossing: CO and H<sub>2</sub> binding reaction to molybdenocene