Oral program

Presentation time
PL: 45 min presentation + 5 min discussion
KN: 25 min presentation + 5 min discussion
OP: 15 min presentation + 5 min discussion

August 3 / Room A (5F: meeting room)
9:20 - 9:30 Opening Remarks

9:30 - 10:20 Chair: Jun-ya Hasegawa

9:30 - 10:20 PL-1 Kazunari Domen (The University of Tokyo, Japan)
Water splitting photocatalysts for solar hydrogen production

10:20 - 10:40 Coffee break

10:40 - 11:50 Chair: Satoshi Kameoka

10:40 - 11:10 KN-A1 Marc Armbrüster (Chemnitz University of Technology, Germany)
Intermetallic Compounds as Platform Materials in Heterogeneous Catalysis

11:10 - 11:30 OP-A1 Stuart L. Soled (ExxonMobil Research and Engineering Co., USA)
Highly Dispersed, Uniformly Distributed, Noble Metal Catalysts on Silica

11:30 - 11:50 OP-A2 Shinya Furukawa (Hokkaido University, Japan)
Selective Catalysis Controlled by Specific and Highly Ordered Surface Atomic Arrangement of Intermetallic Compounds

11:50 - 13:10 Lunch

13:10 - 14:00 Chair: Atsushi Fukuoka

13:10 - 14:00 PL-2 Alexander Katz (University of California, Berkeley, USA)
Molecular Design of Deactivation-Resistant Lewis-Acid Catalysts and Materials for Biomass Feedstock Detoxification

14:00 - 14:20 Coffee break
14:20 - 15:30  Chair: Takashi Toyao

14:20 - 14:50  KN-A2  Masahiro Ehara (Institute for Molecular Science, Japan)
*Theoretical Chemistry for Complex Systems: Nanocluster and Heterogeneous Catalysts*

14:50 - 15:10  OP-A3  Manoj B. Gawande (Palacky University, Czech)
*Nanocatalysis by Sustainable Advanced Nanomaterials*

15:10 - 15:30  OP-A4  Ningqiang Zhang (Beijing University of Technology, China)
*Precise-Control Synthesis of α-/β-MnO₂ Materials by Adding Zn(acac)₂ as a Phase Transformation-Inducing Agent and Their ORR Performance*

15:30 - 15:50  Coffee break

15:50 - 16:30  Chair: Zen Maeno

15:50 - 16:10  OP-A5  Ekaterina Shuvarakova (Boreskov Institute of Catalysis, Russia)
*Effect of Electron-Donor Sites and Alumina Phase Transformations on Stability of Pd-Rh Three-Way Catalysts*

16:10 - 16:30  OP-A6  Li Lingcong (Beijing University of Technology, China)
*Hydrothermal stability of core-shell Pd@Ce₀.₅Zr₀.₅O₂/Al₂O₃ catalyst for automobile three-way reaction*

August 3 / Room B (4F: seminar room B, C)

10:40 - 11:50  Chair: Masahiro Ehara

10:40 - 11:00  OP-B1  Jiaxu Liu (Dalian University of Technology)
*The green production of 2-alkylanthraquinones by nano-sized H-Beta zeolite catalysts*

11:00 - 11:20  OP-B2  Akira Nakayama (Hokkaido University, Japan)
*Role of the Acid-Base and Redox Sites on Catalytic Reactions at the Liquid/CeO₂ Interface: First-Principle Simulations*

11:20 - 11:50  KN-B1  Xin Xu (Fudan University, China)
*Beyond the mean-field microkinetics: Towards the accurate and efficient theoretical modelling in heterogeneous catalysis*

11:50 - 13:10  Lunch
14:20 - 15:30  Chair: Shinya Furukawa

14:20 - 14:40  OP-B3  Takayuki Kojima (Tohoku University, Japan)
Heusler alloys for selective hydrogenation of alkyne

14:40 - 15:00  OP-B4  Sonali Das (National University of Singapore, Singapore)
Sandwiched Core-shell Ni-SiO$_2$@CeO$_2$ catalyst for coke-free Dry Reforming of Methane: Performance & Mechanism Study

15:00 - 15:30  KN-B2  An-Pang Tsai (Tohoku University, Japan)
The role of twinning defects on catalysis in Au and Cu

15:30 - 15:50  Coffee break

15:50 - 16:30  Chair: Kiyotaka Nakajima

15:50 - 16:10  OP-B5  Wontae Kim (Hokkaido University, Japan)
Adjacent acid-base pair sites on silica surface constructed by hydrolysis of pre-anchored amide fixed on silica

16:10 - 16:30  OP-B6  Jiri Kulhavy (University of Oxford, UK)
Functionalized metal oxide nanocrystals as a highly acidic heterogeneous catalyst

August 4 / Room A (5F: meeting room)

9:00 - 9:50  Chair: Ken-ichi Shimizu

9:00 - 9:50  PL-3  Ye Wang (Xiamen University, China)
Bifunctional Catalysis for Hydrogenation of CO and CO$_2$ into Lower Olefins

9:50 - 10:10  Coffee break

10:10 - 11:10  Chair: Ken-ichi Shimizu

10:10 - 10:40  KN-A3  Gang Fu (Xiamen University, China)
Control the selectivity of hydrogenation using the organic modification strategy

10:40 - 11:10  KN-A4  Youzhu Yuan (Xiamen University, China)
Elucidation of the structures of tungsten carbides for regioselective hydrogenolysis of aryl ether C-O bonds

11:10 - 11:20  Coffee break
11:20 - 12:10  Chair: Yuichi Kamiya

11:20 - 11:50  **KN-A5**  Ning Yan (National University of Singapore, Singapore)
*Chemical Production of Amino Acids from Woody Biomass*

11:50 - 12:10  **OP-A7**  Abhijit Shrotri (Hokkaido University, Japan)
*Phosphoric acid pretreatment for heterogeneously catalyzed hydrolysis of cellulose*

12:10 - 13:40  Lunch

13:40 - 14:20  Chair: Ewa Kowalska

13:40 - 14:00  **OP-A8**  Haruki Nagakawa (Tokyo University of Science, Japan)
*Water splitting with anti photocorrosive CdS composite photocatalyst*

14:00 - 14:20  **OP-A9**  Sarina Sarina (Queensland University of Technology, Australia)
*Epoxidation of Alkenes with Molecular Oxygen Using Copper Nanoparticles as Visible-Light Photocatalysts*

14:20 - 14:40  **OP-A10**  Kiyotaka Asakura (Hokkaido University, Japan)
*Elucidation of local structure change of photocatalysts during the photoabsorption process by use of fs-ps pump-probe XAFS method*

14:45 -  Closing Remarks

**August 4 / Room B (4F: seminar room B, C)**

10:10 - 11:10  Chair: S. M. A. Hakim Siddiki

10:10 - 10:30  **OP-B7**  Kyogo Maeda (Tokyo Institute of Technology, Japan)
*Rh Complex and Tertiary Amine on a Same Silica Surface: Detailed Characterization and Catalysis for Hydrosilylation of Olefins*

10:30 - 10:50  **OP-B8**  Xiao Liu (Central China Normal University, China)
*Heterogeneous Molecular Catalysts Derived from Bipyridine-based Organosilica Nanotubes for C-H Bond Activation*

10:50 - 11:10  **OP-B9**  Takashi Toyao (Hokkaido University, Japan)
*Selective hydrogenation of carboxylic acids and their derivatives over a Re/TiO₂ catalyst*

11:10 - 11:20  Coffee break
11:20 - 12:00  **Chair: Satoru Takakusagi**

11:20 - 11:40  **OP-B10**  **SocMan Ho-Kimura** (University of Macau, Macau)
*Synthesis method and photoelectrochemical properties of renewable Cu$_2$O composite electrode*

11:40 - 12:00  **OP-B11**  **Feng R. Wang** (University College London, UK)
*Decoupling and identification of Cu single site, dimer and clusters over CeO$_2$ surface*

12:00 - 13:30  Lunch

13:30 - 14:00  **Chair: Akira Nakayama**

13:30 - 14:00  **KN-B3**  **Nisanth Nair** (Indian Institute of Technology Kanpur, India)
*Probing the Mechanism of Antibiotic Resistance by Beta-Lactamase Bacterial Enzymes*

14:00 – 14:40  **Chair: Hirokazu Kobayashi**

14:00 - 14:20  **OP-B12**  **Takafumi Shiraogawa** (The Graduate University for Advanced Studies, Japan)
*Mechanistic study of olefin migration reaction catalyzed by photo-activated Metal–Macrocycle Framework (MMF)*

14:20 - 14:40  **OP-B13**  **Giuliana Ercolino** (Politecnico di Torino, Italy)
*Steam Reforming of Methane on Pt/CeO$_2$ Catalyst: Effect of Daily Startup and Shutdown on Long Term Stability*