International symposium on heterogeneous catalysis for sustainable energy and chemical production -6th international symposium of Institute for Catalysis-

Date: February 4th(Mon)-5th(Tue), 2019  
Venue: Conference room at 5th floor, Institute for Catalysis, Hokkaido University  
(http://www.cat.hokudai.ac.jp/access-e.html)  
Organizer: Institute for catalysis, Hokkaido University  
Cooperation: 1) Japan Science & Technology agency (JST)  
2) Research Division of Catalytic Biomass Conversion, Catalysis Society of Japan  
3) Research and Education Center for Robust Agriculture, Forestry and Fisheries Industry, Hokkaido University  
4) STAC-10 Project, Laboratory for Materials and Structures, Institute of Innovative Research, Tokyo Institute of Technology  
Sponsor: Shimadzu Corporation  
Chair: Dr. Kiyotaka Nakajima (Institute for Catalysis, Hokkaido University)  
Co-chair: Prof. Dr. Emiel J.M. Hensen (Eindhoven University of Technology)  
Secretary: Dr. Abhijit Shrotri  

Description: The emission of CO₂, a powerful greenhouse gas (GHG), is the leading cause of global warming. To counter this issue, Japan Science & Technology launched the Advanced Low Carbon Technology Research and Development Program in 2010, which was aimed towards the development of technologies that reduce CO₂ emission in the atmosphere. This symposium will highlight the fundamental and applied research topics in the field of heterogeneous catalysis for sustainable production of energy and chemicals from renewable resources with the aim of minimizing CO₂ emission.

Plenary lecture, 60 min: 50 min for presentation, 10 min for discussion  
Invited talk, 30 min: 25 min for presentation, 5 min for discussion  

Monday, February 4th  
10:00-10:10 Opening remark by Prof. Jun-ya Hasegawa  
Session Chair: Prof. Kiyotaka Asakura  
10:10-11:10 Plenary Lecture 1 (Prof. Dr. Bert Weckhuysen, Utrecht University)  
Making & Breaking of Chemical Bonds: Turning CO₂ and Waste into Chemicals  
Session Chair: Prof. Ken-ichi Shimizu  
11:10-11:40 Invited Lecture 1 (Dr. Keigo Kamata, Tokyo Institute of Technology)  
Development of Crystalline Mixed Metal Oxide Catalysts for Biomass Conversion  
11:40-12:10 Invited Lecture 2 (Dr. Takashi Hisatomi, Shinshu University)  
Heterogeneous Photocatalysts and Reaction Systems for Renewable Hydrogen Production via Water Splitting
12:10-13:00  Lunch

Session Chair: Prof. Atsushi Fukuoka

13:00-14:00  Plenary Lecture 2 (Prof. Dr. Emiel J.M. Hensen, TU/e)
Valorization of lignocellulosic biomass: from catalytic chemistry to novel processes

14:00-14:30  Invited Lecture 3 (Prof. Mizuki Tada, Nagoya University)
XAFS Imaging of Solid Catalysts

14:30-15:00  Invited Lecture 4 (Prof. Kazuhiro Takanabe, The University of Tokyo)
Electrolyte engineering for advanced water splitting

15:00-15:30  Tea break
Session Chair: Prof. Yuichi Kamiya

15:30-16:00  Invited Lecture 5 (Dr. Hiroshi Sano, Mitsubishi Chemical Corporation)
Biomass plastics and biodegradable plastics, solution for the future?

16:00-16:30  Invited Lecture 6 (Dr. Kiyotaka Nakajima, Hokkaido University)
Smart HMF conversion to FDCA and its carboxylates with supported Au catalyst

16:30-17:00  Invited Lecture 7 (Prof. Michikazu Hara, Tokyo Institute of Technology)
HMF conversion into polymer monomers

17:00-17:30  Invited Lecture 8 (Prof. Atsushi Fukuoka, Hokkaido University)
Catalytic depolymerization of cellulose and chitin

18:15-20:00  Banquet, Faculty house trillium, Restaurant Elm,
(https://www.global.hokudai.ac.jp/about/facilities/restaurants-dining/faculty-house-trillium/)

Tuesday, February 5th

Session Chair: Prof. Emiel J.M. Hensen

9:00-10:00  Plenary Lecture 3 (Prof. Keiichi Tomishige, Tohoku University)
Heterogeneous deoxydehydration catalyst for conversion of polyols to chemicals

10:00-10:20  Tea break

Session Chair: Prof. Emiel J.M. Hensen

10:20-10:50  Invited Lecture 9 (Dr. Takato Mitsudome, Osaka University)
Green Sustainable production of Amines from Amides

10:50-11:20  Invited Lecture 10 (Dr. Toshiyuki Yokoi, Tokyo Institute of Technology)
Control of heteroatom distribution in zeolite framework and its impact on catalytic properties

11:20-11:50  Invited Lecture 11 (Prof. Takao Masuda, Hokkaido University)
Separation of Biomass to Each Component of Lignocellulose in Chemical Reaction Engineering Approach

11:50-  Closing remark by Prof. Atsushi Fukuoka
Registration:
Please send e-mail to Kiyotaka Nakajima with your name, full affiliation, phone number, email address, and whether or not to attend the banquet. Deadline for registration of banquet is January 18th.

Conference fee: Free of charge
Banquet fee: 5,000 JPY

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