

## Plenary Lectures

Room A:

PL1	10:00, July 25, Monday	Chair	Atsushi MURAMATSU (Tohoku University)
Single-atom catalysis: progress, opportunity and challenge		Tao ZHANG	Dalian Institute of Chemical Physics
PL2	18:00, July 25, Monday	Chair	Tatsumi ISHIHARA (Kyushu University)
Catalysis using gold containing nanomaterials		Graham J. HUTCHINGS	Cardiff University
PL3	9:00, July 26, Tuesday	Chair	Keiichi TOMISHIGE (Tohoku University)
Heterogeneous catalysis for valorization of cellulose and chitin		Atsushi FUKUOKA	Hokkaido University
PL4	18:00, July 26, Tuesday	Chair	Yoshitada MORIKAWA (Osaka University)
Activating N <sub>2</sub> - the Haber-Bosch process and beyond		Jens K. NØRSKOV	Technical University of Denmark
PL5	9:00, July 27, Wednesday	Chair	Haruyuki MAKIO (Mitsui Chemicals)
Development of homogeneous olefin polymerization catalysts with tunable selectivity		Jerzy KLOSIN	The Dow Chemical Company
PL6	18:00, July 27, Wednesday	Chair	Yoshihiro KUBOTA (Yokohama National University)
Oxygenate-mediated conversion of CO <sub>2</sub> to light olefins and fuels - fundamental and applied aspects		Unni OLSBYE	University of Oslo
PL7	9:00, July 28, Thursday	Chair	Akihiko KUDO (Tokyo University of Science)
Semiconductor photocatalysts and their combination with molecular catalysts for energy storage and environmental improvement		Takeshi MORIKAWA	Toyota Central R&D Laboratories
PL8	16:00, July 28, Thursday	Chair	Hiroyuki SEKI (JGC Catalysts and Chemicals)
Challenges in refining and petrochemical catalysis		Omer Refa KOSEGLU	Saudi Aramco
PL9	9:00, July 29, Friday	Chair	Yutaka AMAO (Osaka Metropolitan University)
Design of nanostructured catalysts for hydrogen-carbon cycles and environmental uses		Hiroshi YAMASHITA	Osaka University

## Keynote Lectures

KL1	Room D, 11:30, July 25, Monday		
Controlling reactivity for electrochemical reduction through mass transport and charged polymer overlayers		Adam Z. WEBER	Lawrence Berkeley National Laboratory
KL2	Room B, 12:10, July 25, Monday		
Photocatalytic water splitting and CO <sub>2</sub> fixation as artificial photosynthesis		Akihiko KUDO	Tokyo University of Science
KL3	Room E, 14:30, July 25, Monday		
Effect of hydrogen spillover on acidic properties of silica-supported tungsten oxide catalyst		Piyasan PRASERTHDAM	Chulalongkorn University
KL4	Room A, 16:10, July 25, Monday		
Zeolite catalysis contribution to a sustainable chemical industry		Andrei-Nicolae PARVULESCU	BASF SE
KL5	Room A, 16:50, July 25, Monday		
Catalysis for a more sustainable chemistry		Rhett KEMPE	Universität Bayreuth
KL6	Room A, 10:30, July 26, Tuesday		
Research and development of automotive materials and parts using material digital transformation		Hirohito HIRATA	Toyota Motor Corporation
KL7	Room A, 11:10, July 26, Tuesday		
Advanced FCC catalyst design for chemical refinery		Takaki MIZUNO	JGC Catalysts and Chemicals
KL8	Room A, 13:30, July 26, Tuesday		
Carbon nitride photocatalysts for overall water splitting		Xinchen WANG	Fuzhou University
KL9	Room E, 14:10, July 26, Tuesday		
A new class of zeolite catalyst with location and state of active sites controlled		Toshiyuki YOKOI	Tokyo Institute of Technology
KL10	Room E, 14:50, July 26, Tuesday		
Tailoring acid catalysts for sustainable bio-refining		Jun HUANG	The University of Sydney
KL11	Room A, 16:10, July 26, Tuesday		
Heterogeneous catalysis concepts for a sustainable future		Jorge GASCON	King Abdullah University of Science and Technology
KL12	Room D, 16:50, July 26, Tuesday		
Concerto catalysis of transition metals and zeolite microporous sieves		Dirk E. De VOS	KU Leuven
KL13	Room B, 10:30, July 27, Wednesday		
Biocatalysts to widen the feedstock pool		Jennifer HOLMGREN	LanzaTech
KL14	Room B, 11:10, July 27, Wednesday		
Development for hydrogen storage and transportation technology by using novel dehydrogenation catalyst in MCH-LOHC system		Yoshimi OKADA	Chiyoda Co.
KL15	Room C, 13:30, July 27, Wednesday (APCAT Session)		
Artificial Photosynthesis for Solar Fuel Production: Fundamental and Application		Can LI	Dalian Institute of Chemical Physics, Chinese Academy of Sciences
KL16	Room C, 14:10, July 27, Wednesday (APCAT Session)		
Design Strategy for Developing New Catalysts using Nanotechnology and DFT Calculation		Kwan-Young LEE	Korea University
KL17	Room B, 15:50, July 27, Wednesday		
Challenges and solutions for relevant laboratory protocols for FCC catalyst testing		Marius KIRCHMANN	hte GmbH

KL18	Room E, 15:50, July 27, Wednesday		
	Heterogeneous Atomic Catalysts Overcoming the Limitations of Single-Atom Catalysts	Hyunjoo LEE	Korea Advanced Institute of Science and Technology
KL19	Room C, 16:30, July 27, Wednesday (APCAT Session)		
	Innovating Sustainable Catalyst Systems for Low-Carbon Energy Solutions	Sibudjing KAWI	National University of Singapore
KL20	Room A, 16:50, July 27, Wednesday		
	Bridging the gap between well-defined and industrial catalysts via a molecular approach	Christophe COPÉRET	ETH Zürich
KL21	Room C, 17:10, July 27, Wednesday (APCAT Session)		
	Controlling redox and acid catalyst function to control rates and product selectivity	Michael STOCKENHUBER	The University of Newcastle
KL22	Room C, 10:30, July 28, Thursday		
	Thermochemical properties of reactive hydrogen and its catalytic consequences in hydrogenation and hydrogenolysis catalysis	Ya-Huei Cathy CHIN	University of Toronto
KL23	Room B, 11:10, July 28, Thursday		
	Fully exposed palladium cluster catalysts enable hydrogen production from nitrogen heterocycles	Ding MA	Peking University
KL24	Room B, 13:30, July 28, Thursday		
	Controlling reaction routes and product selectivity in C1 chemistry	Ye WANG	Xiamen University
KL25	Room E, 14:10, July 28, Thursday		
	Advancing catalysis via nanoscale engineering	Javier PÉREZ-RAMÍREZ	ETH Zürich
KL26	Room C, 14:50, July 28, Thursday		
	Coupled operando EPR as a powerful tool for mechanistic investigations of catalytic reactions	Jabor RABEAH	Leibniz Institute for Catalysis at the University of Rostock
KL27	Room A, 10:30, July 29, Friday		
	Valorization of polyolefins via catalytic upcycling	Susannah SCOTT	University of California, Santa Barbara
KL28	Room B, 11:10, July 29, Friday		
	Non-reductive CO <sub>2</sub> conversion to carbonates, carbamates, and ureas catalyzed by CeO <sub>2</sub> under low CO <sub>2</sub> pressure	Keiichi TOMISHIGE	Tohoku University
KL29	Room D, 13:30, July 29, Friday		
	Design of efficient photocatalysts and electrocatalysts for oxygen evolution and CO <sub>2</sub> reduction reactions	Rong XU	Nanyang Technological University
KL30	Room B, 14:10, July 29, Friday		
	Low temperature catalysis by surface protonics	Yasushi SEKINE	Waseda University
KL31	Room D, 14:50, July 29, Friday		
	Opportunities of ball milling in catalysis	Ferdi SCHÜTH	Max-Planck-Institut für Kohlenforschung

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## Invited Lectures

IL1 Room C, 14:50, July 27, Wednesday (APCAT Session)

Photo-Fenton enhanced twin-reactor for green hydrogen production and organic wastewater degradation simultaneously	Jeffrey Chi-Sheng WU	National Taiwan University
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IL2 Room C, 15:10, July 27, Wednesday (APCAT Session)

Visible-light driven synthesis for ingredient of biodegradable polymer with the system of water-soluble zinc porphyrin and platinum nano-particles	Yutaka AMAO	Osaka Metropolitan University
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IL3 Room C, 15:50, July 27, Wednesday (APCAT Session)

Formation of 3D-nanostructured solid carbon products from CO <sub>2</sub> at room temperature under the dynamic CO <sub>2</sub> electrochemical reduction environment	Joongjai PANPRANOT	Chulalongkorn University
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IL4 Room C, 16:10, July 27, Wednesday (APCAT Session)

Nano Au catalysts and Rh supported ionic liquid phase for the production of propanal/propanol from ethylene, hydrogen and CO/CO <sub>2</sub>	Le Minh THANG	Hanoi University of Science and Technology
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Opening Ceremony	Room A,	9:30, July 25, Monday
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Closing Ceremony	Room A,	15:30, July 29, Friday
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Banquet and welcome reception	NOT scheduled	
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