

1st Japan-China Symposium on Catalysis (1stJCSC)



October 10-12, 2021
Virtual, Osaka University
Osaka, Japan

Program and Abstracts

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Welcome to 1stJCSC

On behalf of the organizing committee, I would like to welcome you, all the participants in the 1st Japan-China Symposium on Catalysis (1stJCSC), which is held during 10-12 October 2021 in Virtual, Osaka, Japan.

Catalysis research in Japan and China has made great progress and is now leading the world. This symposium will bring together catalysis researchers from both countries to exchange cutting-edge information and engage in hot discussions, which will contribute to the further development of catalysis research. More importantly, it will deepen the understanding and friendship of researchers between the two countries, and deepen the friendship and exchange of human beings, not only academically but also culturally. I think that this symposium should take on such a place from now on. With this in mind, the symposium was scheduled originally to be held in May 2020, but was forced to be extended twice due to the spread of Corona infections. However, although it is held in Virtual, I am very happy to be able to successfully hold it and open a new door to exchanges between the two countries. Anything cannot separate our friendship.

I believe that all the participants could enjoy this symposium and JCSC could contribute to raise research activities in Asia, specially between Japan and China, not only through face-to-face but also virtual style.

I would like to express sincere thanks to organizing committee members and students for their sacrifice and contributions in preparing this symposium. Professor Feng-Shou Xiao at Zhejiang University and Professor Jinlong Zhang at East China University of Science & Technology are greatly acknowledged for their efforts as the Chinese coordinator. Financial support and dedication from Osaka University is also greatly appreciated.

Please enjoy the symposium and make good friends though the fruitful discuss on catalysis.



Chairperson, 1stJCSC

Hiromi YAMASHITA

Osaka University



General Information

1st Japan-China Symposium on Catalysis (1stJCSC)

Date: October 10th -12th, 2021

Venue: Virtual (Osaka University)

<http://www.mat.eng.osaka-u.ac.jp/msp1/1stJCSC/index.html>

Secretary Office of 1st JCSC (E-mail): 1stJCSC@mat.eng.osaka-u.ac.jp

Meeting ID & PW:

<For Security, please contact 1st JCSC office to get ID & PW:

1st JCSC office (E-mail): 1stJCSC@mat.eng.osaka-u.ac.jp>

Date:	Room:	ID:	PW:
Oct. 10 th (Sun)	Room A: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	XXXX <in large character>
	Room B: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	
Oct. 11 th (Mon)	Room A: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	
	Room B: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	
Oct. 12 th (Tue)	Room A: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	
	Room B: https://xxxxxx.xxx/xxxxxxx	xxx xxx xxxx	

Orgnization

Chair:

Prof. Hiromi Yamashita (Osaka University)

Coordinator in China:

Prof. Feng-Shou Xiao (Zhejiang University)

Prof. Jinlong Zhang (East China University of Science & Technology)

Vice Chair:

Prof. Masaya Matsuoka (Osaka Prefecture University)

Secretary:

Prof. Yasutaka Kuwahara (Osaka University)

Program:

Prof. Kohsuke Mori (Osaka University)

Prof. Yasutaka Kuwahara (Osaka University)

Treasurer:

Prof. Takashi Kamegawa (Osaka Prefecture University)

Organized and Supported by:

Executive Committee of 1st Japan-China Symposium on Catalysis

Osaka University's International Joint Research Promotion Program

Grant-in-Aid for Scientific Research (A) Project on (A19H008380)" (MEXT, JSPS)

Catalysis Society of Japan

Invited participants from China:

Prof. Hong He	(Chinese Academy of Sciences)
Prof. Fengtao Fan	(Dalian Institute of Chemical Physics)
Prof. Xiuli Wang	(Dalian Institute of Chemical Physics)
Prof. Jinlong Zhang	(East China University of Science and Technology)
Prof. Lingzhi Wang	(East China University of Science and Technology)
Prof. Xue-Qing Gong	(East China University of Science and Technology)
Prof. Li Tan	(Fuzhou University)
Prof. Yi-Jun Xu	(Fuzhou University)
Prof. Xinchun Wang	(Fuzhou University)
Prof. Taicheng An	(Guangdong University of Technology)
Prof. Weibin Fan	(Institute of Coal Chemistry)
Prof. Yang Lou	(Jiangnan University)
Prof. Chengsi Pan	(Jiangnan University)
Prof. Ying Zhang	(Jiangnan University)
Prof. Fuwei Li	(Lanzhou Institute of Chemical Physics)
Prof. Gongxuan Lu	(Lanzhou Institute of Chemical Physics)
Prof. Haijun Chen	(Nankai University)
Prof. Xinhua Gao	(Ningxia University)
Prof. Ding Ma	(Peiking University)
Prof. Zheng Wang	(Research Center for Eco-Environmental Sciences)
Prof. Zhenfeng Bian	(Shanghai Normal University)
Prof. Hengquan Yang	(Shanxi University)
Prof. Bo-Qing Xu	(Tsinghua University)
Prof. Junhua Li	(Tsinghua University)
Prof. Yongfa Zhu	(Tsinghua University)
Prof. Junling Lu	(University of Science and Technology of China)
Prof. Jun Xu	(Wuhan Institute of Physics and Mathematics)
Prof. Gang Fu	(Xiamen University)
Prof. Fengshou Xiao	(Zhejiang University)
Prof. Xiangju Meng	(Zhejiang University)

Invited participants from Japan:

Prof. Atsushi Fukuoka	(Hokkaido University)
Prof. Hiromi Matsubishi	(Hokkaido University)
Prof. Takanori Miyake	(Kansai University)
Prof. Hiroshi Kominami	(Kindai University)
Prof. Hiroshi Onishi	(Kobe University)
Prof. Hiroshi Yoshida	(Kumamoto University)
Prof. Kentaro Teramura	(Kyoto University)
Prof. Hisao Yoshida	(Kyoto University)
Prof. Hisahiro Einaga	(Kyushu University)
Prof. Masaaki Haneda	(Nagoya Institute of Technology)
Prof. Atsushi Satsuma	(Nagoya University)
Prof. Aritomo Yamaguchi	(National Institute of Advanced Industrial Science and Technology)
Prof. Naoki Mimura	(National Institute of Advanced Industrial Science and Technology)
Prof. Hiroaki Sakurai	(National Institute of Advanced Industrial Science and Technology)
Prof. Masanobu Higashi	(Osaka City University)
Prof. Yutaka Amao	(Osaka City University)
Prof. Shinya Higashimoto	(Osaka Institute of Technology)
Prof. Masaya Matsuoka	(Osaka Prefecture University)
Prof. Kohsuke Mori	(Osaka University)
Prof. Tomoo Mizugaki	(Osaka University)
Prof. Yasutaka Kuwahara	(Osaka University)
Prof. Priyanka Verma	(Osaka University)
Prof. Tsuyoshi Takata	(Shinshu University)
Prof. Masahiro Fujiwara	(Tohoku Center)
Prof. Keiichi Tomishige	(Tohoku University)
Prof. Masazumi Tamura	(Tohoku University)
Prof. Masaaki Kitano	(Tokyo Institute of Technology)
Prof. Tetsuya Shishido	(Tokyo Metropolitan University)
Prof. Naonobu Katada	(Tottori University)
Prof. Satoshi Sugauma	(Tottori University)
Prof. Yasushi Sekine	(Waseda University)

Publication of *Catalysis Today* Special Issue:



Special Issue for 1stJCSC will be published in *Catalysis Today* (Elsevier)

Impact factor: 6.766

The title of special issue: Special Issue for the 1st Japan-China Symposium on Catalysis

Short title of the SI: **JSCS-2021**

Submission period: December/1st/2021-March/31th/2022 <no extension>

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Guest editors: Hiromi Yamashita (Osaka University)
Fengshou Xiao (Zhejiang University)
Jinlong Zhang (East China University of Science and Technology)

Program of 1st JCSC

1st Japan-China Symposium on Catalysis (1stJCSC)

Virtual, Osaka University

Oct. 10th(Sun) - 12th(Tue), 2021

Sunday Oct. 10, 2021

Room A (Session - ①, ②, ③, ④)

Room B (Session - ③, ④)

Monday Oct. 11, 2021

Room A (Session - ⑤, ⑥, ⑦, ⑧, ⑨)

Room B (Session - ⑧, ⑨)

Tuesday Oct. 12, 2021

Room A (Session - ⑩, ⑪, ⑫, ⑬, ⑭)

Room B (Session - ⑫, ⑬, ⑭)

Presentation time including question:

Plenary Lecture	(PL)	40 min
Keynote Lecture	(KN)	20 min
Invited Lecture	(IL)	20 min
Oral Presentation	(OP)	15 min

Program Timetable (Speaker)

1st Japan-China Symposium on Catalysis (1stJCSC)									
Day	Day 1 October 10th (Sun)			Day 2 October 11th (Mon)			Day 3 October 12th (Tue)		
Room	Room A	Room B		Room A	Room B		Room A	Room B	
9:30									
9:40									
9:50			Session ⑤	PL-2 (40 min)		Session ⑩	PL-4 (40 min)		
10:00			(9:30	Keiichi Tomishige		(9:30	Jinlong Zhang		
10:10			-10:30)			-10:50)			
10:20	Opening			KN-5 (20 min)			KN-9 (20 min)		
10:30				Bo-Qing Xu			Xinchen Wang		
10:40				Coffee break (10 min)			KN-10 (20 min)		
10:50				IL-21 (20 min)			Yongfa Zhu		
11:00	Session ①	PL-1 (40 min)		Aritomo Yamaguchi		Coffee break (10 min)			
11:10	(10:40	Atsushi Satsuma		IL-22 (20 min)		Session ⑪	IL-33 (20 min)		
11:20	-12:00)			Tetsuya Shishido		(11:00	Shinya Higashimoto		
11:30		KN-1 (20 min)	Session ⑥	IL-23 (20 min)		-12:00)	IL-34 (20 min)		
11:40		Hong He	(10:40	Xue-Qing Gong			Chengsi Pan		
11:50		KN-2 (20 min)	-12:00)	IL-24 (20 min)			IL-35 (20 min)		
		Atsushi Fukuoka		Naoki Mimura			Hiroaki Sakurai		
12:00	Lunch			Lunch			Lunch		
13:00	Session ②	KN-3 (20 min)					IL-36 (20 min)	OP-11 (15 min)	
13:10	(13:00	Junhua Li		PL-3 (40 min)		Session ⑫	Gongxuan Lu	Yu Cui	
13:20	-13:40)			Feng-Shou Xiao		(13:00	IL-37 (20 min)	OP-12 (15 min)	
13:30		KN-4 (20 min)	Session ⑦			-14:20)	Masanobu Higashi	Kah-Wei Ting	
13:40		Taicheng An	(13:00	KN-6 (20 min)			OP-13 (15 min)	Yingluo He	
13:50	Coffee break (10 min)		-14:40)	Yasushi Sekine			OP-14 (15 min)	Xin Deng	
14:00		IL-1 (20 min)		KN-7 (20 min)			IL-38 (20 min)	OP-15 (15 min)	
14:10		Xiangju Meng		Ding Ma			Xiuli Wang	Lisheng Guo	
14:20	Session ③	IL-2 (20 min)		KN-8 (20 min)			IL-39 (20 min)		
14:30	(13:50	Hisahiro Einaga		Naonobu Katada			Hiroshi Onishi		
14:40	-15:30)	IL-3 (20 min)		Coffee break (20 min)			Coffee break (20 min)		
14:50		Haijun Chen					IL-40 (20 min)	OP-16 (15 min)	
15:00		IL-4 (20 min)					Tsuyoshi Takata	Qi-An Huang	
15:10		IL-5 (20 min)					IL-41 (20 min)	OP-17 (15 min)	
15:20		Hiroshi Yoshida		Session ⑧	IL-25 (20 min)	OP-1 (15 min)	Zheng Wang	Hui Zhou	
15:30		Masaaki Haneda		(15:00	Li Tan	Yuan Jing	IL-42 (20 min)	OP-18 (15 min)	
15:40		Junling Lu		-16:20)	IL-26 (20 min)	OP-2 (15 min)	Yutaka Amao	Yuan Fang	
15:50		Tomoo Mizugaki			Takanori Miyake	Han Sun	IL-43 (20 min)	OP-19 (15 min)	
16:00					IL-27 (20 min)	OP-3 (15 min)	Kentarō Teramura	Weican Wang	
16:10		IL-6 (20 min)			Weilbin Fan	OP-4 (15 min)		OP-20 (15 min)	
16:20	Session ④	Masaaki Kitano			IL-28 (20 min)	Yuan Huang	Coffee break (10 min)		
16:30	(15:50	Fuwei Li			Masahiro Fujiwara	OP-5 (15 min)			
16:40	-17:30)					Kazuki Kusu			
16:50		IL-7 (20 min)		Coffee break (10 min)			IL-44 (20 min)	OP-21 (15 min)	
17:00		Fengtao Fan					Hisao Yoshida	Abhijit Shrotri	
17:10		IL-8 (20 min)			IL-29 (20 min)	OP-6 (15 min)	IL-45 (20 min)	OP-22 (15 min)	
17:20		Hiroshi Kominami			Jun Xu	Yingchun Yan	Ying Zhang	Lujie Liu	
17:30		IL-9 (20 min)			IL-30 (20 min)	OP-7 (15 min)	IL-46 (20 min)	OP-23 (15 min)	
17:40		Yi-Jun Xu			Xinhua Gao	Yoshifumi Kondo	Zhenfeng Bian	Takuya Sagawa	
17:50		Yasutaka Kuwahara			IL-31 (20 min)	OP-8 (15 min)	IL-47 (20 min)	OP-24 (15 min)	
		Lingzhi Wang			Satoshi Suganuma	Jun Yang	Masaya Matsuoka	Lu Chen	
		Hengquan Yang			IL-32 (20 min)	OP-9 (15 min)	OP-25 (15 min)		
					Hiroimi Matsuhashi	Hao Ge	Yu Gu		
						OP-10 (15 min)	Closing remarks & Social gathering		
						Longfei Guo			

Program Timetable (Chairperson)

1st Japan-China Symposium on Catalysis (1stJCSC)															
Day	Day 1 October 10th (Sun)		Day 2 October 11th (Mon)		Day 3 October 12th (Tue)		Room A	Room B							
Room	Room A	Room B	Room A	Room B	Room A	Room B	Room A	Room B							
9:30															
9:40			Session	Jinlong Zhang			Hiromi Yamashita								
9:50			⑤												
10:00			(9:30												
10:10			-10:30)												
10:20	Opening		Coffee break (10 min)												
10:30															
10:40															
10:50			Coffee break (10 min)												
11:00	Session ① (10:40	Feng-Shou Xiao	Session	Tetsuya Shishido		Session	Shinya Higashimoto								
11:10									⑥	Xue-Qing Gong	⑪	Chengsi Pan			
11:20									(10:40		(11:00				
11:30									-12:00)		-12:00)				
11:40															
11:50															
12:00	Lunch		Lunch		Lunch										
13:00	Session ② (13:00	Atsushi Satsuma	Session	Masaya Matsuoka		Session	Masanobu Higashi	Kohsuke Mori							
13:10									⑦		⑫	Gongxuan Lu			
13:20									(13:00		(13:00				
13:30									-13:40)		-14:20)				
13:40	Coffee break (10 min)		Coffee break (20 min)		Coffee break (20 min)										
13:50															
14:00	Session ③ (13:50	Masaaki Haneda	Session	Takanori Miyake	Li Tan	Session	Yutaka Amao	Takashi Kamegawa							
14:10									⑧	Yasutaka Kuwahara	⑬	Zheng Wang			
14:20									(13:50	Xiangju Meng	(15:00				
14:30									-15:30)	Tomoo Mizugaki	-16:20)				
14:40										Junling Lu					
14:50															
15:00	Coffee break (20 min)		Coffee break (10 min)		Coffee break (10 min)										
15:10															
15:20															
15:30	Session ④ (15:50	Hiroshi Kominami	Session	Satoshi Suganuma	Jun Xu	Session	Hisao Yoshida	Yasutaka Kuwahara							
15:40									⑨	Kohsuke Mori	⑭	Zhenfeng Bian			
15:50									(15:50	Masazumi Tamura	(16:30				
16:00									-17:30)	Fuwei Li	-17:50)				
16:10															
16:20															
16:30	Coffee break (10 min)		Closing remarks & Social gathering		Closing remarks & Social gathering										
16:40															
16:50															
17:00															
17:10															
17:20															
17:30															
17:40															
17:50															

Program

Day1 Oct.10th (Sun)

Room A

Opening (10:20-10:40)

Hiromi Yamashita (Osaka University)

Feng-Shou Xiao (Zhejiang University)

Jinlong Zhang (East China University of Science & Technology)

< Session ① >

Chairperson :

Feng-Shou Xiao (Zhejiang University)

PL-1 (10:40-11:20)

Atsushi Satsuma (Nagoya University)

“Combustion on supported Pd catalysts-effects of particle structure and metal-support interaction”

KN-1 (11:20-11:40)

Hong He (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences)

“Room temperature catalytic decomposition of gases ozone over Mn-based catalysts”

KN-2 (11:40-12:00)

Atsushi Fukuoka (Hokkaido University)

“Low temperature oxidation of ethylene over Pt/silica”

Lunch (12:00-13:00)

< Session ② >

Chairperson :

Atsushi Satsuma (Nagoya University)

KN-3 (13:00-13:20)

Junhua Li (Tsinghua University)

“The synergetic mechanism of NO_x and chlorobenzene abatement from flue gas”

KN-4 (13:20-13:40)

Taicheng An (Guangdong University of Technology)

“Rational catalyst designing to meet the challenge of catalytic combustion of volatile organic compounds”

Break (13:40-13:50)

< Session ③ >

Chairperson :

Masaaki Haneda (Nagoya Institute of Technology)

Xiangju Meng (Zhejiang University)

IL-1 (13:50-14:10)

Xiangju Meng (Zhejiang University)

“Zeolites as efficient catalysts in environmental applications”

IL-2 (14:10-14:30)

Hisahiro Einaga (Kyushu University)

“Catalytic properties of manganese-based mixed metal oxides under microwave heating for air pollution control”

IL-3 (14:30-14:50)

Haijun Chen (Nankai University)

“Formation of highly active superoxide sites on CuO nanoclusters encapsulated in SAPO-34 for catalytic selective ammonia oxidation”

IL-4 (14:50-15:10)

Hiroshi Yoshida (Kumamoto University)

“A study on supported Fe-Ni alloy nanoparticles three-way catalysts”

IL-5 (15:10-15:30)

Masaaki Haneda (Nagoya Institute of Technology)

“Oxidative coupling of methane over Ba/Y₂O₃ focusing on similarity with active site for NO decomposition”

Break (15:30-15:50)

< Session ④ >

Chairperson :

Hiroshi Kominami (Kindai University)

Lingzhi Wang (East China University of Science and Technology)

IL-6 (15:50-16:10)

Masaaki Kitano (Tokyo Institute of Technology)

“Ammonia synthesis over perovskite-type oxynitride-hydride”

IL-7 (16:10-16:30)

Fengtao Fan (Dalian Institute of Chemical Physics, Chinese Academy of Sciences)

“Spatial imaging of photogenerated charges in solar fuel production”

IL-8 (16:30-16:50)

Hiroshi Kominami (Kindai University)

“Plasmonic photocatalysts having core-shell structure”

IL-9 (16:50-17:10)

Yi-Jun Xu (Fuzhou University)

“Promoting optical absorption of metal nanoparticles by recycling near-field photons”

IL-10 (17:10-17:30)

Lingzhi Wang (East China University of Science and Technology)

“Ga-doped and Pt-loaded porous $\text{TiO}_2\text{-SiO}_2$ for photocatalytic nonoxidative coupling of methane”

Room B

< Session ③ >

Chairperson :

Tomoo Mizugaki (Osaka University)

Junling Lu (University of Science and Technology of China)

IL-11 (13:50-14:10)

Priyanka Verma (Osaka University)

“Mesoporous silica supported plasmonic nanocatalysts for visible-light driven catalysis”

IL-12 (14:10-14:30)

Yang Lou (Jiangnan University)

“Enzyme-like Rh₁/MoS₂ single-atom catalyst for selective hydrogenation of crotonaldehyde to crotyl alcohol”

IL-13 (14:30-14:50)

Kohsuke Mori (Osaka University)

“Nanocatalyst engineering for formic acid/CO₂-mediated chemical hydrogen delivery/storage”

IL-14 (14:50-15:10)

Junling Lu (University of Science and Technology of China)

“A new approach to precise synthesis of heterogeneous catalyst: atomic layer deposition”

IL-15 (15:10-15:30)

Tomoo Mizugaki (Osaka University)

“Catalytic transformation of biogenic carboxylic acid derivatives”

Break (15:30-15:50)

< Session ④ >

Chairperson :

Masazumi Tamura (Tohoku University)

Fuwei Li (Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences)

IL-16 (15:50-16:10)

Fuwei Li (Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences)

“Development of efficient heterogeneous catalysts for selective transformations of C=O and C-O bonds”

IL-17 (16:10-16:30)

Masazumi Tamura (Tohoku University)

“Direct synthesis of polycarbonates from CO₂ and diols by using a combination catalyst of CeO₂ and nitriles”

IL-18 (16:30-16:50)

Gang Fu (Xiamen University)

“Enhancing the selective hydrogenation by interfaces”

IL-19 (16:50-17:10)

Yasutaka Kuwahara (Osaka University)

“Yolk-shell nanostructured silica-polymer-metal nanoparticles composite as a nanoreactor for hydrogenation reactions”

IL-20 (17:10-17:30)

Hengquan Yang (Shanxi University)

“Continuous-flow catalysis based on pickering droplets: bridging homogeneous and heterogeneous catalysis”

Day 2 Oct. 11th (Mon)

Room A

< Session ⑤ >

Chairperson :

Jinlong Zhang (East China University of Science & Technology)

PL-2 (9:30-10:10)

Keiichi Tomishige (Tohoku University)

“Production of biomass-derived C4 chemicals via erythritol by deoxydehydration and hydrogenolysis”

KN-5 (10:10-10:30)

Bo-Qing Xu (Tsinghua University)

“Selectivity control of Au-catalyzed glycerol oxidation in water”

Break (10:30-10:40)

< Session ⑥ >

Chairperson :

Tetsuya Shishido (Tokyo Metropolitan University)

Xue-Qing Gong (East China University of Science and Technology)

IL-21 (10:40-11:00)

Aritomo Yamaguchi (National Institute of Advanced Industrial Science and Technology)

“Aromatic monomer production from lignocellulosic biomass using supported metal catalysts”

IL-22 (11:00-11:20)

Tetsuya Shishido (Tokyo Metropolitan University)

“Role of bismuth in promoting the selective oxidation of glycerol over supported PtBi catalyst under mild conditions”

IL-23 (11:20-11:40)

Xue-Qing Gong (East China University of Science and Technology)

“Evolutionary algorithms aided computational simulations of twinning boundaries in twinned gold nanorod”

IL-24 (11:40-12:00)

Naoki Mimura (National Institute of Advanced Industrial Science and Technology)

“Flow oxidation of glycerol over nano-sized gold catalysts”

Lunch (12:00-13:00)

< Session ⑦ >

Chairperson :

Masaya Matsuoka (Osaka Prefecture University)

PL-3 (13:00-13:40)

Feng-Shou Xiao (Zhejiang University)

“New strategies for stabilization of metal nanoparticle-based catalysts”

KN-6 (13:40-14:00)

Yasushi Sekine (Waseda University)

“Low temperature heterogeneous catalysis by surface protonics”

KN-7 (14:00-14:20)

Ding Ma (Peking University)

“From syngas to olefins and aromatics over Fe₅C₂-based catalyst”

KN-8 (14:20-14:40)

Naonobu Katada (Tottori University)

“Brønsted acid strength of zeolite”

Break (14:40-15:00)

< Session ⑧ >

Chairperson :

Takanori Miyake (Kansai University)

Li Tan (Fuzhou University)

IL-25 (15:00-15:20)

Li Tan (Fuzhou University)

“The design of bimetallic single atom catalyst in MPO reaction”

IL-26 (15:20-15:40)

Takanori Miyake (Kansai University)

“Ethylene synthesis by the dehydrogenation of ethane on Pt/Zincosilicate catalyst”

IL-27 (15:40-16:00)

Weibin Fan (Institute of Coal Chemistry, Chinese Academy of Sciences)

“Oriented control of catalytic performance of zeolites for methanol conversion by regulation the aluminium siting in its framework”

IL-28 (16:00-16:20)

Masahiro Fujiwara (National Institute of Advanced Industrial Science and Technology, Tohoku Center)

“Production of aromatic hydrocarbons from CO₂”

Break (16:20-16:30)

< Session ⑨ >

Chairperson :

Satoshi Suganuma (Tottori University)

Jun Xu (Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences)

IL-29 (16:30-16:50)

Jun Xu (Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences)

“Mechanistic understanding of zeolite catalysed conversion of short-chain alcohol to hydrocarbons by solid-state NMR”

IL-30 (16:50-17:10)

Xinhua Gao (Ningxia University)

“Hydrophobic Fe-based FTS catalyst with low CO₂ selectivity”

IL-31 (17:10-17:30)

Satoshi Suganuma (Tottori University)

“Selective hydrogenation of amino acids”

IL-32 (17:30-17:50)

Hiromi Matsubishi (Hokkaido University)

“Preparation of SrO–Al₂O₃ base catalyst applying solid-liquid interface reaction”

Room B

< Session ⑧ >

Chairperson :

Yasutaka Kuwahara (Osaka University)

OP-1 (15:00-15:15)

Yuan Jing (Hokkaido University)

“Three-way catalysis of La-loaded Al_2O_3 -supported Pd catalysts: promotional effect of La”

OP-2 (15:15-15:30)

Han Sun (Nankai University)

“Research on methanol-SCR reaction on FER zeolite-based catalysts”

OP-3 (15:30-15:45)

Hiroe Kubota (Hokkaido University)

“Spectroscopic and Theoretical Studies for Formation and Reactions of NH_4NO_3 during Transient and Steady-state NH_3 -SCR of NO_x over H-AFX Zeolites”

OP-4 (15:45-16:00)

Yuan Huang (Hokkaido University)

“Application of water-resistant MOF for catalytic reduction of nitrite and nitrate in water”

OP-5 (16:00-16:15)

Kazuki Kusu (Osaka University)

“ CO_2 hydrogenation using Pt-loaded molybdenum sub-oxide with surface plasmon resonance”

Break (16:15-16:30)

< Session ⑨ >

Chairperson :

Kohsuke Mori (Osaka University)

OP-6 (16:30-16:45)

Yingchun Yan (China University of Petroleum)

“The crystallinity of metal oxide in carbonized metal organic frameworks and the effect on catalytic degradation polysulfides”

OP-7 (16:45-17:00)

Yoshifumi Kondo (Osaka University)

“Ruthenium-complex incorporated in titanium-based MOF for photocatalytic benzyl alcohol oxidation”

OP-8 (17:00-17:15)

Jun Yang (China University of Petroleum)

“Bifunctional transition metal oxide nanocatalysts for highly efficient and stable overall water splitting”

OP-9 (17:15-17:30)

Hao Ge (Osaka University)

“Plasmon-induced catalytic CO₂ hydrogenation by a nano-sheet Pt/H_xMoO_{3-y} hybrid with abundant surface oxygen vacancies”

OP-10 (17:30-17:45)

Longfei Guo (Hokkaido University)

“Facile synthesis of ZnFe₂O₄/SnO₂ composite for enhanced photocatalytic and photo-fenton reaction”

Day 3 Oct. 12th (Tue)

Room A

< Session ⑩ >

Chairperson :

Hiromi Yamashita (Osaka University)

PL-4 (9:30-10:10)

Jinlong Zhang (East China University of Science and Technology)

“Preparation and characterization of the modified TiO₂ with enhanced photocatalytic activity”

KN-9 (10:10-10:30)

Xinchen Wang (Fuzhou University)

“The progresses of photoredox catalysis by carbon nitride polymers”

KN-10 (10:30-10:50)

Yongfa Zhu (Tsinghua University)

“Supramolecular photocatalysts for pollutant degradation and tumor removal”

Break (10:50-11:00)

< Session ⑪ >

Chairperson :

Shinya Higashimoto (Osaka Institute of Technology)

Chengsi Pan (Jiangnan University)

IL-33 (11:00-11:20)

Shinya Higashimoto (Osaka Institute of Technology)

“Visible-light induced photocatalysis for decomposition of VOC on Pt-WO₃ enhanced by simple physical mixing with TiO₂”

IL-34 (11:20-11:40)

Chengsi Pan (Jiangnan University)

“Bi₂₅CoO₃₉, a narrow-bandgap photocatalyst with high activity”

IL-35 (11:40-12:00)

Hiroaki Sakurai (National Institute of Advanced Industrial Science and Technology (AIST))

“H₂ production and water purification by granular photocatalyst”

Lunch (12:00-13:00)

< Session ⑫ >

Chairperson :

Masanobu Higashi (Osaka City University)

Gongxuan Lu (Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences)

IL-36 (13:00-13:20)

Gongxuan Lu (Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences)

“Enhance sulphide catalyst for photocatalytic overall water splitting by inhibition photocorrosion”

IL-37 (13:20-13:40)

Masanobu Higashi (Osaka City University)

“Surface-modified metal sulfides as stable H₂ evolving photocatalyst in Z-scheme Water Splitting System with [Fe(CN)₆]^{3-/4-} Redox Mediator under visible light”

IL-38 (13:40-14:00)

Xiuli Wang (Dalian Institute of Chemical Physics, Chinese Academy of Sciences)

“Water oxidation mechanisms in photo(electro)catalytic water splitting”

IL-39 (14:00-14:20)

Hiroshi Onishi (Kobe University)

“Metal cation doping to perovskite-structured compounds for artificial photosynthesis”

Break (14:20-14:40)

< Session ⑬ >

Chairperson :

Yutaka Amao (Osaka City University)

Zheng Wang (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences)

IL-40 (14:40-15:00)

Tsuyoshi Takata (Shinshu University)

“Overall water splitting on a particulate photocatalyst with a quantum efficiency approaching 100%”

IL-41 (15:00-15:20)

Zheng Wang (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences)

“Photocatalytic overall water splitting by Ta₃N₅ nano-crystals grown on KTaO₃”

IL-42 (15:20-15:40)

Yutaka Amao (Osaka City University)

“Visible-light driven C-H bond activation and carboxylation with CO₂ using a hybrid system of biocatalyst / photocatalytic dye”

IL-43 (15:40-16:00)

Kentaro Teramura (Kyoto University)

“Highly concentrated CO evolution for photocatalytic conversion of CO₂ by H₂O as an electron donor”

Break (16:00-16:10)

< Session ⑭ >

Chairperson :

Hisao Yoshida (Kyoto University)

Zhenfeng Bian (Shanghai Normal University)

IL-44 (16:10-16:30)

Hisao Yoshida (Kyoto University)

“Photocatalytic reduction of carbon dioxide with water over modified potassium hexatitanate crystal photocatalysts”

IL-45 (16:30-16:50)

Ying Zhang (Jiangnan University)

“Few-layer bismuth materials for converting CO₂ into fuels”

IL-46 (16:50-17:10)

Zhenfeng Bian (Shanghai Normal University)

“Selective recovery of precious metals through photocatalysis”

IL-47 (17:10-17:30)

Masaya Matsuoka (Osaka Prefecture University)

“Applications of MOF catalysts for the visible-light-driven water splitting reactions”

Closing Remarks & Social Gathering (17:30-)

Hiromi Yamashita (Osaka University)

Feng-Shou Xiao (Zhejiang University)

Jinlong Zhang (East China University of Science & Technology)

Room B

< Session ⑫ >

Chairperson :

Kohsuke Mori (Osaka University)

OP-11 (13:00-13:15)

Yu Cui (University of Toyama)

“Enhanced liquid fuel production from CO₂ hydrogenation: catalytic performance of bimetallic catalysts over a two-stage reactor system”

OP-12 (13:15-13:30)

Kah-Wei Ting (Hokkaido University)

“CO₂ utilization via hydrogenation using TiO₂-supported Re Catalyst”

OP-13 (13:30-13:45)

Yingluo He (University of Toyama)

“Direct synthesis of methanol from methane using Pd-Au/CNTs catalysts under mild conditions”

OP-14 (13:45-14:00)

Xin Deng (Nankai University)

“Stable single-site heterogeneous catalysts for alkyne selective hydrogenation”

OP-15 (14:00-14:15)

Lisheng Guo (University of Toyama)

“Nitrogen functionalized carbonaceous material catalysts for efficient CO₂ hydrogenation”

Break (14:15-14:40)

< Session ⑬ >

Chairperson :

Takashi Kamegawa (Osaka Prefecture University)

OP-16 (14:40-14:55)

Qi-An Huang (Kyushu Univerisry)

“Catalytic isomerization of allylic esters over supported Pt and Au nanocatalysts via soft lewis acid mechanism”

OP-17 (14:55-15:10)

Hui Zhou (East China University of Science and Technology)

“A DFT + U study of the clean and hydroxylated CeO₂(100) surface toward CO oxidation”

OP-18 (15:10-15:25)

Yuan Fang (University of Toyama)

“NaBH₄ in-situ reduced cobalt catalyst supported on zeolite a for 1-Hexene hydroformylation”

OP-19 (15:25-15:40)

Weican Wang (Tokyo Institute of Technology)

“Hydrodeoxygenation of erythritol over carbon supported Cu catalyst prepared from ion exchange resin”

OP-20 (15:40-15:55)

Aiko Hanaki (Osaka University)

“Synthesis of porous functional materials from blast furnace slag and evaluation of their CO₂ adsorption performance”

Break (15:55-16:10)

< Session ⑭ >

Chairperson :

Yasutaka Kuwahara (Osaka University)

OP-21 (16:10-16:25)

Abhijit Shrotri (Hokkaido University)

“Kinetics of β -1,4 glycosidic bond hydrolysis in cello-oligosaccharides over carbon catalysts”

OP-22 (16:25-16:40)

Lujie Liu (Tohoku University)

“Hydrogenolysis of glycerol to 1,3-propanediol over Ir-ReO_x supported on rutile titania”

OP-23 (16:40-16:55)

Takuya Sagawa (Hokkaido University)

“Acid-catalyzed dehydration of a sugar alcohol derived from chitin”

OP-24 (16:55-17:10)

Lu Chen (East China University of Science and Technology)

“Theoretical studies of CH₄ activation on metal-doped Ceria”

OP-25 (17:10-17:25)

Yu Gu (Tohoku University)

“Selective transformation of CO₂, anilines, and alcohols into alkyl N-arylcarbamates using CeO₂ and 2-Cyanopyridine”

Closing Remarks & Social gathering (17:30-) at Room A

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Abstract of 1st JCSC

1st Japan-China Symposium on Catalysis (1stJCSC)

Virtual, Osaka University

Oct. 10th(Sun) - 12th(Tue), 2021

Plenary Lectures : PL 1 - 4

Prof. Atsushi Satsuma	(Nagoya University)
Prof. Keiichi Tomishige	(Tohoku University)
Prof. Fengshou Xiao	(Zhejiang University)
Prof. Jinlong Zhang	(East China University of Science and Technology)

Keynote Lectures : KN 1 - 10

Prof. Hong He	(Chinese Academy of Sciences)
Prof. Atsushi Fukuoka	(Hokkaido University)
Prof. Junhua Li	(Tsinghua University)
Prof. Taicheng An	(Guangdong University of Technology)
Prof. Bo-Qing Xu	(Tsinghua University)
Prof. Yasushi Sekine	(Waseda University)
Prof. Ding Ma	(Peiking University)
Prof. Naonobu Katada	(Tottori University)
Prof. Xinchun Wang	(Fuzhou University)
Prof. Yongfa Zhu	(Tsinghua University)

Invited Lectures : IL 1- 47

Oral Presentation : OP 1 -25