

Plenary Lectures

Room S: Main Hall

PL1	16:30, August 5, Sunday	<i>Chair: T. Tatsumi (NITE)</i>	
Designing zeolites for catalytic applications	Avelino Corma	Instituto de Tecnologia Quimica	
PL2	9:00, August 6, Monday	<i>Chair: A. Fukuoka (Hokkaido Univ.)</i>	
Innovation in Complex Metal Oxide Catalysts for Selective Oxidation	Wataru Ueda	Kanagawa University	
PL3	10:00, August 6, Monday	<i>Chair: K. Tomishige (Tohoku Univ.)</i>	
Novel concept of C1 Chemistry	Xinhe Bao	University of Science and Technology of China (USTC)	
PL4	9:00, August 7, Tuesday	<i>Chair: T. Setoyama (Mitsubishi Chemical)</i>	
Shifting frontiers in applied catalysis	Marvin Estenfelder	Clariant	
PL5	10:00, August 7, Tuesday	<i>Chair: T. Fujita (Mitsui Chemicals)</i>	
New Performance from Old Monomers: Advances in Olefin Block Copolymers	Edmund Carnahan	The Dow Chemical Company	
PL6	9:00, August 8, Wednesday	<i>Chair: A. Kudo (Tokyo Univ. Science)</i>	
The dark reaction of artificial photosynthesis: Catalytic hydrogenation of CO ₂	Can Li	Dalian Institute of Chemical Physics	
PL7	10:00, August 8, Wednesday	<i>Chair: K. Asakura (Hokkaido Univ.)</i>	
Catalysts Live and Up Close: Structure and Dynamics Probed with Operando Microscopy and Spectroscopy	Bert Weckhuysen	University of Utrecht	
PL8	9:00, August 9, Thursday	<i>Chair: K. Eguchi (Kyoto Univ.)</i>	
Porous materials for catalysis and sustainability	Wha-Seung Ahn	Inha University	
PL9	10:00, August 9, Thursday	<i>Chair: H. Yamashita (Osaka Univ.)</i>	
Development of Novel Dehydrogenation Catalyst for Hydrogen Carrier System	Yoshimi Okada	Chiyoda Corporation	

Keynote Lectures

KA101	Room A, 11:30, August 6, Monday	Chair: S. I. Chan (Academia Sinica) and K. Yoshizawa (Kyusyu Univ.)	
Taming Methane. Dehydrogenation, Olefination and Catalytic Borylation Reactions		<u>Daniel J Mendiola</u>	University of Pennsylvania
KA104	Room A, 14:30, August 6, Monday	Chair: G. Li (Delft Univ. Tech.) and W. Ueda (Kanagawa Univ.)	
The Methane Challenge: A Cold Experimental/Computational Approach to a Hot Problem		<u>Helmut Schwarz</u>	Technische Universität Berlin
KA108	Room A, 16:50, August 6, Monday	Chair: E. Hensen (Tech. Univ. Eindhoven) and T. Shishido (Tokyo Metropolitan Univ.)	
Oxidative Methane Activation over Microporous Materials		<u>Raul F. Lobo</u>	University of Delaware
KA205	Room A, 14:30, August 7, Tuesday	Chair: G. Hutchings (Cardiff Univ.) and I. Yamanaka (Tokyo Inst. Tech.)	
New insights into active sites and mechanism of methane aromatization on Mo/ZSM-5		<u>Emiel Hensen</u>	Technische Universiteit Eindhoven
KA210	Room A, 16:50, August 7, Tuesday	Chair: D. J. Mendiola (Univ. Pennsylvania) and S. Ted Oyama (Univ. Tokyo)	
Methane oxidation using gold-containing nanoparticles		<u>Graham Hutchings</u>	Cardiff University
KA301	Room A, 11:30, August 8, Wednesday	Chair: H. Y. Zhu (Queensland Univ. Tech.) and K. Takanae (Univ. Tokyo)	
Photoelectrochemical water splitting for solar hydrogen production over oxide semiconductors: A perspective		<u>Jae Sung Lee</u>	Ulsan National Institute of Science and Technology
KA310	Room A, 16:50, August 8, Wednesday	Chair: J. S. Lee (UNIST) and T. Hisatomi (Univ. Tokyo)	
Identification of Optimal Redox Shuttle Properties for Efficient Photocatalytic Z-Scheme Solar Water Splitting Reactors		<u>Shane Ardo</u>	University of California Irvine
KA405	Room A, 12:50, August 9, Thursday	Chair: S. Ardo (Univ. California Irvine) and K. Sayama (AIST)	
Molecular Designed Solid Catalysts for Energy Applications		<u>Xu Rong</u>	Nanyang Technological University
KA501	Room A, 9:00, August 1, Friday	Chair: K. Yamaguchi (Univ. Tokyo) and K. Teramura (Kyoto Univ.)	
Photocatalytic carbon monoxide evolution from carbon dioxide in aqueous solution by the aid of artificial photosynthesis		<u>Tsunehiro Tanaka</u>	Kyoto University
KB103	Room B, 12:10, August 6, Monday	Chair: H. Toshima (Albemarle Catalysts) and A. Yamaguchi (AIST)	
INNOVATION AND RESEARCH STRATEGY FOR A NEW HYDROCRACKING CATALYST		<u>Omer Koseoglu</u>	Saudi Aramco
KB106	Room B, 15:10, August 6, Monday	Chair: O. Koseoglu (Saudi aramco) and W. Ninomiya (Mitsubishi Chemical)	
Applied Catalysis and STAX [®] Modeling for Petroleum Residue Upgrading		<u>Hiroshi Toshima</u>	Albemarle Catalysts Company BV
KB109	Room B, 16:50, August 6, Monday	Chair: X. Rong (Nanyang Tech. Univ.) and H. Seki (JXTG Nippon Oil&Energy)	
Catalyst Design and Development for a Novel Methyl Methacrylate Process		<u>John Runnacles</u>	Lucite International UK Ltd
KB203	Room B, 12:10, August 7, Tuesday	Chair: A. Urakawa (ICIQ) and S. Watanabe (Johnson Matthey)	
Innovative process for carbonates from CO ₂		<u>Budianto Nishiyama</u> , Masaaki Shinohata, Nobuhisa Miyake	Asahi Kasei Corp.
KB210	Room B, 16:50, August 7, Tuesday	Chair: J. Shan (Nice America Research) and A. Satsuma (Nagoya Univ.)	
Advancement of Environmental Catalysts to Improve "Real-World" Automotive Aftertreatment		<u>Chang Hwan Kim</u>	Hyundai Motor Group
KC205	Room C, 14:30, August 7, Tuesday	Chair: S. Kawi (National Univ. Singapore) and H. Yamashita (Osaka Univ.)	
Direct oxygen insertion to C-H bond by enzyme-mimic copper complexes		<u>Chung-Yuan Mou</u>	National Taiwan University
KC210	Room C, 16:50, August 7, Tuesday	Chair: J. C.-W. Wu (National Taiwan Univ.) and K. Tomishige (Tohoku Univ.)	
A Significant Enhancement of Catalytic Properties by Adjusting Catalyst Wettability		<u>Fengshou Xiao</u>	Zhejiang University
KC211	Room C, 17:30, August 7, Tuesday	Chair: J. C.-W. Wu (National Taiwan Univ.) and K. Tomishige (Tohoku Univ.)	
Tungsten dispersion and coke reduction on metathesis catalyst for propene production		<u>Piyasan Praserttham</u> , Surasa Maksasithorn, Wimonrat Limsangkass, Narongrat Poovarawan	Chulalongkorn University
KC310	Room C, 16:50, August 8, Wednesday	Chair: A. Wang (Dalian Inst. Chem. Phys.) and K. Kamata (Tokyo Inst. Tech.)	
Catalysis in Confined Spaces		<u>F. Dean Toste</u>	UC Berkeley
KC401	Room C, 11:30, August 9, Thursday	Chair: A. Katz (Univ. California) and M. Hara (Tokyo Inst. Tech.)	
Hybrid catalysis as the next challenge in biorefineries: concept and examples		<u>Franck Dumeignil</u> , Alexandra Gimbernat, Marie Guehl, Mickael Capron, Nicolas Lopes Ferreira, Renato Froidevaux, Jean-Sebastien Girardon, Pascal Dhulster, Damien	Universite de Lille, IFP Energies Nouvelles

		Delcroix	
KC404	Room C, 12:50, August 9, Thursday	Chair: F. Dumeignil (Lille Univ.) and M. Machida (Kumamoto Univ.)	
On route to understanding ligand control of catalysis on supported cluster surfaces		<u>Alexander Katz</u>	University of California
KD103	Room D, 12:10, August 6, Monday	Chair: Y. Wang (Xiamen Univ.) and K. Shimizu (Hokkaido Univ.)	
Catalysis for upgrading C1 feedstocks		<u>Aditya Bhan</u> , Anurag Kumar	University of Minnesota Twin Cities
KD104	Room D, 14:30, August 6, Monday	Chair: A. Tanksale (Monash Univ.) and K. Shimizu (Hokkaido Univ.)	
Stability of CO hydrogenation catalysts studied in-situ		<u>Michael Claeys</u>	University of Cape Town
KD107	Room D, 15:50, August 6, Monday	Chair: A. Bhan (Univ. Minnesota Twin Cities) and K. Mori (Osaka Univ.)	
Development of new syngas conversion routes beyond Fischer-Tropsch synthesis		<u>Ye Wang</u>	Xiamen University
KD110	Room D, 17:30, August 6, Monday	Chair: M. Claeys (Univ. Cape Town) and N. Tsubaki (Univ. Toyama)	
One-pot conversion of carbon oxides into formaldehyde and its derivatives in liquid phase reactions		<u>Aksha Tanksale</u>	Monash University
KD313	Room D, 17:30, August 8, Wednesday	Chair: S. Hinokuma (Kumamoto Univ.) and K. Nagaoka (Oita Univ.)	
Strategic Development of Catalyst-Membrane System for CO ₂ and Biomass Conversions		<u>Sibudjing Kawi</u>	National University of Singapore
KE101	Room E, 11:30, August 6, Monday	Chair: C. Coperet (ETH Zurich) and T. Murayama (Tokyo Metropolitan Univ.)	
Space- and time-resolved operando spectroscopic studies of heterogeneous catalysts under unsteady-state operations		<u>Atsushi Urakawa</u>	Institute of Chemical Research of Catalonia (ICIQ)
KE106	Room E, 15:10, August 6, Monday	Chair: J. Xu (Wuhan Inst. Phys. Math.) and R. Watanabe (Shizuoka Univ.)	
Molecular understanding and controlled functionalization of surfaces towards single-site catalysts and beyond		<u>Christophe Coperet</u>	ETH Zurich
KE201	Room E, 11:30, August 7, Tuesday	Chair: K. Tomishige (Tohoku Univ.) and A. Nakayama (Hokkaido Univ.)	
Photochemistry of doped metal oxides. Is there some hope for applications in visible-light photocatalysis?		<u>Elio Giamello</u>	University of Torino
KE206	Room E, 15:10, August 7, Tuesday	Chair: S. Kawi (National Univ. Singapore) and A. Yoshida (Hirosaki Univ.)	
Tailoring MOFs for CO ₂ hydrogenation reactions		<u>Unni Olsbye</u>	University of Oslo
KE211	Room E, 17:30, August 7, Tuesday	Chair: Y. Yuan (Xiamen Univ.) and T. Furusawa (Utsunomiya Univ.)	
Functional Nanoporous Materials for Lignocellulosic Biomass Conversion		<u>Kevin C.-W. Wu</u>	National Taiwan University
KE308	Room E, 15:50, August 8, Wednesday	Chair: G. Centi (Univ. Messina) and H. Einaga (Kyusyu Univ.)	
Selectivity control in acid-base catalysis for valorisation of biomass derivatives		<u>Bo-Qing Xu</u>	Tsinghua University
KF107	Room F, 15:10, August 6, Monday	Chair: P.-W. Chung (Academia sinica) and M. Shirai (Iwate Univ.)	
Selective hydrogenolysis of cellulose and its derivatives to chemicals: catalytic functions and reaction pathways		<u>Haichao Liu</u>	Peking University
KF209	Room F, 15:50, August 7, Tuesday	Chair: E. Tsang (Univ. Oxford) and T. Mizugaki (Osaka Univ.)	
New Catalytic Pathways for Production of α , ω -diols from Biomass		Jiayue He, Kefeng Huang, Kevin J Barnett, Siddarth Krishna, David M Alonso, Zachary J Brentzel, Samuel P Burt, Theodore Walker, William F Banholzer, Christos T Maravelias, Ivo Hermans, James A Dumesic, <u>George W Huber</u>	University of Wisconsin-Madison
KF307	Room F, 15:10, August 8, Wednesday	Chair: K. Cheng (Xiamen Univ.) and N. Mimura (AIST)	
Designing Porous Catalysts for Biomass Transformations		<u>Karen Wilson</u> , Adam F Lee	RMIT University
KF312	Room F, 17:30, August 8, Wednesday	Chair: A. Bansode (ICIQ) and T. Sasaki (Univ. Tokyo)	
Sustainable Catalysts for the fixation of Carbon Dioxide and Carbon Monoxide as C-1 sources to synthesize the Value Added Chemicals		<u>Bhalchandra Bhanage</u> , Vitthal Saptal	Institute of Chemical Technology
KF403	Room F, 12:10, August 9, Thursday	Chair: K. Tomishige (Tohoku Univ.) and T. Yabe (Waseda Univ.)	
Hydrogen borrowing methodology for catalytic synthesis of amines and alcohols		<u>Irina L. Simakova</u>	Boreskov Institute of Catalysis
KF503	Room F, 9:40, August 1, Friday	Chair: H. Kobayashi (Hokkaido Univ.) and S. Inagaki (Yokohama National Univ.)	
Role of heterogeneous catalysis in the biorefinery of wood into chemicals		<u>Bert Sels</u>	KU Leuven

Room A

August 6, Monday

11:30-12:50 Chair: S. I. Chan (Academia sinica) and K. Yoshizawa (Kyusyu Univ.)

KA101	11:30	Taming Methane. Dehydrogenation, Olefination and Catalytic Borylation Reactions	<u>Daniel J MINDIOLA</u>	University of Pennsylvania
OA102	12:10	Alkane Hydroxylation Catalyzed by A Nickel Complex Supported by Non-innocent Ligand	Mayu ITOH, Yuta HORI, Yoshihito SHIOTA, Yuma MORIMOTO, Hideki SUGIMOTO, Kazunari YOSHIZAWA, Shinobu ITOH	Osaka University, Kyushu University
OA103	12:30	Gaseous Alkane and Benzene Hydroxylation by Cytochrome P450BM3 with Decoy Molecules	Osami SHOJI, Shinya ARIYASU, Yuichiro AIBA, Zhiqi CONG, Sota YANAGISAWA, Joshua K. STANFIELD, Hiroshi SUGIMOTO, Yoshitsugu SHIRO, Yoshihito WATANABE	Nagoya University, JST CREST, RIKEN, University of Hyogo, Nagoya University

12:50-14:30 Lunch

14:30-16:30 Chair: G. Li (Delft Univ. Tech.) and W. Ueda (Kanagawa Univ.)

KA104	14:30	The Methane Challenge: A Cold Experimental/Computational Approach to a Hot Problem	<u>Helmut SCHWARZ</u>	Technische Universität Berlin
OA105	15:30	Quantum chemical studies on methane hydroxylation by various transition-metal-oxo species	Haris MAHYUDDIN, Alexandar STAYKOV, Yoshihito SHIOTA, Kazunari YOSHIZAWA	Kyushu University
OA106	15:50	Quantum Chemical Studies of Methane Oxidation to Methanol on a Biomimetic Tricopper Complex: A Mechanistic View	<u>Chen-Hao YEH</u> , Steve S.-F. YU, Sunny I. CHAN, Jyh-Chiang JIANG	National Taiwan University of Science and Technology, Academia Sinica
OA107	16:10	Theoretical study on the methane activation on CeO ₂ (100) surface	<u>Kaoru YAMAZAKI</u> , Nobuki OZAWA, Momoji KUBO	Tohoku University

16:30-16:50 Coffee break

16:50-18:10 Chair: E. Hensen (Tech. Univ. Eindhoven) and T. Shishido (Tokyo Metropolitan Univ.)

KA108	16:50	Oxidative Methane Activation over Microporous Materials	<u>Raul F. LOBO</u>	University of Delaware
OA109	17:30	Methane coupling via catalytically generated OH radicals from H ₂ O and O ₂ using Na based catalysts	<u>Kazuhiro TAKANABE</u>	The University of Tokyo
OA110	17:50	Direct Dehydrogenative Conversion of Methane into Higher Hydrocarbons through Liquid-Metal Indium Catalyst	Yuta NISHIKAWA, Hitoshi OGIHARA, Yuki OHTSUKA, Akira NAKAYAMA, Jun-ya HASEGAWA	Tokyo Institute of Technology, Saitama University, Hokkaido University

August 7, Tuesday

11:30-12:50 Chair: R. F. Lobo (Univ. Delaware) and K. Takanabe (Univ. Tokyo)

OA201	11:30	Low-temperature oxidation of methane to syngas by zeolite-supported rhodium sub-nano cluster catalyst	Hirokazu KOBAYASHI, Yuhui HOU, Atsushi FUKUOKA	Hokkaido University
OA202	11:50	Direct conversion of methane into methanol over Cu-CHA	Sae Ha LEE, Sung June CHO, <u>Eun Duck PARK</u>	Ajou University, Chonnam National University
OA203	12:10	Photoelectrochemical conversion of methane to ethane and hydrogen under blue light irradiation	Fumiaki AMANO, Ayami SHINTANI, Hyosuke MUKOHARA, Kenyou TSURUI	The University of Kitakyushu, JST PRESTO
OA204	12:30	Effects of electric field on fine structure and activity of Ln ₂ (WO ₄) ₃ catalysts for oxidative coupling of methane at low temperature	<u>Shuhei OGO</u> , Ayaka SATO, Atsushi ISHIKAWA, Hideaki NAKATSUBO, Kousei IWASAKI, Kota MURAKAMI, Tomohiro YABE, Hiromi NAKAI, Yasushi SEKINE	Waseda University, JST PRESTO, National Institute of Materials Science

12:50-14:30 Lunch

14:30-16:30 Chair: G. Hutchings (Cardiff Univ.) and I. Yamanaka (Tokyo Inst. Tech.)

KA205	14:30	New insights into active sites and mechanism of methane aromatization on Mo/ZSM-5	<u>Emiel HENSEN</u>	Technische Universiteit Eindhoven
OA206	15:10	The Rise of Catalyst Informatics: Realities and Key Concepts	<u>Keisuke TAKAHASHI</u>	National Institute for Materials Science, Hokkaido University
OA207	15:30	Development of catalytic materials for methane valorization on the basis of statistical analysis of literature data	<u>Evgenii V. KONDRATENKO</u> , Martin FAIT, Antonio RICCI, David LINKE, Martin HOLENA	Leibniz Institute for Catalysis

OA208	15:50	On the Dynamic Nature of Mo sites for Methane Dehydroaromatization	Ina VOLLMER, Bart VAN DER LINDEN, Samy OULD-CHIKH, Antonio AGUILAR-TAPIA, Yuri G. SNEIDER, Irina YARULINA, Alma I. OLIVOS SUAREZ, Jean-Louis HAZEMANN, Freek KAPTEIJN, Jorge GASCON	Technical University Delft, King Abdullah University of Science and Technology, Inst. Neel, Sapienza Universita
OA209	16:10	Nature of the active sites confined in Mo/ZSM-5 zeolite for methane dehydroaromatization reaction	Guanna LI, Ina VOLLMER, Nikolay KOSINOV, Agnes SZECSENYI, Evgeny PIDKO, Jorge GASCON	Delft University of Technology
16:30-16:50 Coffee break				
16:50-18:10 Chair: D. J. Mindiola (Univ. Pennsylvania) and S. Ted Oyama (Univ. Tokyo)				
KA210	16:50	Methane oxidation using gold-containing nanoparticles	Graham HUTCHINGS	Cardiff University
OA211	17:30	Catalytic Methane Conversion to Methanol on Cu-SSZ-13	Bahar IPEK, Raul F LOBO	Middle East Technical University, University of Delaware
IA212	17:50	An efficient catalyst for selective methane oxidation under ambient conditions	Sunney I. CHAN	Academia Sinica

August 8, Wednesday

11:30-12:50 Chair: H. Y. Zhu (Queensland Univ. Tech.) and K. Takanabe (Univ. Tokyo)

KA301	11:30	Photoelectrochemical water splitting for solar hydrogen production over oxide semiconductors: A perspective	Jae Sung LEE	Ulsan National Institute of Science and Technology
IA302	12:10	Design of stable mixed-anion semiconductors for photocatalytic water splitting under visible light	Ryu ABE	Kyoto University
IA303	12:30	Surface strategies towards artificial photocatalytic Z-Scheme overall water splitting with wide visible light utilization	Fuxiang ZHANG, Yu QI, Junyan CUI, Can LI	Dalian Institute of Chemical Physics

12:50-14:30 Lunch

14:30-16:30 Chair: F. Zhang (Dalian Inst. Chem. Phys.) and R. Abe (Kyoto Univ.)

OA304	14:30	Efficient and scalable water splitting on particulate photocatalyst sheets	Qian WANG, Takashi HISATOMI, Akihiko KUDO, Taro YAMADA, Kazunari DOMEN	The University of Tokyo, Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPCHEM), Tokyo University of Science
OA305	14:50	α -Fe ₂ O ₃ /Ca ₂ Fe ₂ O ₅ photocatalyst system: synthesis and charge transfer mechanisms	Andris SUTKA, Martins VANAGS	Riga Technical University, University of Tartu, University of Latvia
IA306	15:10	Development of La ₅ Ti ₂ Cu(S _{1-x} Se _x) ₅ O ₇ photocatalysts for hydrogen evolution from water under visible light irradiation	Takashi HISATOMI, Swarnava NANDY, Yosuke GOTO, Yosuke MORIYA, Guijun MA, Masao KATAYAMA, Tsutomu MINEGISHI, Kazunari DOMEN	The University of Tokyo
OA307	15:30	Photocatalytic hydrogen evolution of transition metal sulfides deposited on TiO ₂ : a structure-activity relationship of bifunctional catalysts	Clement MAHEU, Pavel AFANASIEV, Christophe GEANTET, Luis CARDENAS, Eric PUZENAT	Institute of Researches on Catalysis and Environment in Lyon
OA308	15:50	Efficient Water Splitting over Perovskite-type Oxynitride Photoanodes Absorbing a Wide Range of Visible Light	Jeongsuk SEO, Kazunari DOMEN	Shinshu University, Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPCHEM), The University of Tokyo
OA309	16:10	In-situ growth of polymeric carbon nitride films with large conjugated structures for efficient photoelectrochemical water splitting	CAN XUE, Quan GU	Nanyang Technological University

16:30-16:50 Coffee break

16:50-18:10 Chair: J. S. Lee (UNIST) and T. Hisatomi (Univ. Tokyo)

KA310	16:50	Identification of Optimal Redox Shuttle Properties for Efficient Photocatalytic Z-Scheme Solar Water Splitting Reactors	Shane ARDO	University of California Irvine
IA311	17:30	Progress of "Artificial Photosynthesis (ARPCHEM)" Project	Tohru SETOYAMA	Mitsubishi Chemical Corporation
IA312	17:50	Production of valuable chemicals on oxide semiconductor photoelectrodes under visible light for solar chemical conversion process	Kazuhiro SAYAMA	National Institute of Advanced Industrial Science and Technology (AIST)

August 9, Thursday

11:30-13:30 Chair: S. Ardo (Univ. California Irvine) and K. Sayama (AIST)

IA401	11:30	Quantitative description of photocatalysis for water splitting by transferring knowledge from electrocatalysis	Kazuhiro TAKANABE	The University of Tokyo
IA402	11:50	Photon energy threshold in direct photocatalysis of metal nanoparticles - key evidence from action spectrum of the reaction	Huai Yong ZHU, Sarina SARINA	Queensland University of Technology

OA403	12:10	Kinetic analyses of multielectron water oxidation and oxygen reduction in heterogeneous photocatalysis by metal oxide particles	<u>Mai TAKASHIMA</u> , Shugo TAKEUCHI, Haruna HORI, Mai TAKASE, Bunsho OHTANI	Hokkaido University, Muroran Institute of Technology
OA404	12:30	Spatial Charge Separation on Semiconductor-based Photocatalysts for Photocatalytic Water Splitting	<u>Renqiu LI</u> , Xiaoping TAO, Linchao MU, Can LI	Dalian Institute of Chemical Physics
KA405	12:50	Molecular Designed Solid Catalysts for Energy Applications	<u>Xu RONG</u>	Nanyang Technological University

August 10, Friday

9:00-11:00 Chair: *K. Yamaguchi (Univ. Tokyo) and K. Teramura (Kyoto Univ.)*

KA501	9:00	Photocatalytic carbon monoxide evolution from carbon dioxide in aqueous solution by the aid of artificial photosynthesis	<u>Tsunehiro TANAKA</u>	Kyoto University
IA502	9:40	Visible Light Active Carbon Nitride Photocatalyst Enables Direct Upgrade of Raw Elemental Sulfur (S ₈) to Value Added Chemicals	<u>Aleksandr SAVATEEV</u> , Bogdan KURPIL, Markus ANTONIETTI	Max Planck Institute of Colloids and Interfaces
OA503	10:00	Photocatalytic lactonization of diols over platinum-loaded titanium oxide	<u>Hisao YOSHIDA</u> , Emiko WADA, Akanksha TYAGI, Akira YAMAMOTO	Kyoto University
OA504	10:20	Photocatalytic organic synthesis: from fundamental to applications	<u>Ren SU</u> , Yitao DAI, Chao LI, Nina LOCK, Yongwang LI, J. W. (Hans) NIEMANTSVERDIET, Flemming BESENBACHER	Synfuels China Technology Co. Ltd., Aarhus University, Syngaschem BV
IA505	10:40	Water splitting and CO ₂ reduction using newly developed Z-scheme photocatalyst systems	<u>Akihide IWASE</u> , Akihiko KUDO	Tokyo University of Science

11:00-11:30 Coffee break

11:30-12:30 Chair: *A. Savateev (Max Planck Inst. Colloids Interfaces) and T. Tanaka (Kyoto Univ.)*

OA506	11:30	Development of hybrid photocathodes with Ru(II)-Re(I) metal complex photocatalyst for photoelectrochemical CO ₂ reduction in aqueous solution	<u>Hiromu KUMAGAI</u> , Osamu ISHITANI	Tokyo Institute of Technology
OA507	11:50	Converting CO ₂ into fuels by graphitic carbon nitride based photocatalysts	<u>Lingxia ZHANG</u> , Mengli LI, Min WANG, Jianlin SHI	Shanghai Institute of Ceramics
OA508	12:10	Enhancement of CO Evolution by Modification of Ga ₂ O ₃ with Rare-earth Elements for the Photocatalytic Conversion of CO ₂ by H ₂ O	<u>Kentaro TERAMURA</u> , Hiroyuki TATSUMI, Zeai HUANG, Zheng WANG, Hiroyuki ASAKURA, Saburo HOSOKAWA, Tsunehiro TANAKA	Kyoto University

Room B

August 6, Monday

11:30-12:50 Chair: *H. Toshima (Albemarle Catalysts) and A. Yamaguchi (AIST)*

OB101	11:30	Uniformity of carbon supported Pt nanoparticles produced by arc plasma deposition	<u>Yoshiaki AGAWA</u> , Hiroyuki TANAKA, Shigemitsu TORISU, Satoshi TOMINAKA	ADVANCE RIKO, Inc., National Institute for Materials Science
OB102	11:50	In Situ Observations of Dynamic Formation of Highly Dense Isolated Metal Atom Catalytic Sites	<u>Xi LIU</u> , Xiaoping WANG, Yaxin CHEN, Takeshi KASAMA, Zhiwei HUANG, Xingfu TANG	Synfuels China Technology Co., Ltd, Fudan University, Technical University of Denmark
KB103	12:10	Innovation and Research Strategy for a New Hydrocracking Catalyst	<u>Omer KOSEOGLU</u>	Saudi Aramco

12:50-14:30 Lunch

14:30-15:50 Chair: *O. Koseoglu (Saudi aramco) and W. Ninomiya (Mitsubishi Chemical)*

OB104	14:30	Maximizing utilization of reactivated and left-over catalysts in heavy gas oil hydrotreaters: A case study of ADNOC Refining	<u>Paco V LAVEILLE</u> , Abdul-Hamid CHAUDHRY, Gnanapragasam SINGARAVEL, Ryuichiro IWAMOTO, Stephane MORIN, Mikael BERTHOD	ADNOC Refining Research Center, Idemitsu Kosan
OB105	14:50	Hydrotreating catalysts supported on polymer coated silica	<u>Etienne GIRARD</u> , Rajesh MUNIRATHINAM, Dorothee LAURENTI, Elodie DEVERS, Denis UZIO, Gerhard PIRNGRUBER	IFP Energies Nouvelles
KB106	15:10	Applied Catalysis and STAX® Modeling for Petroleum Residue Upgrading	<u>Hiroshi TOSHIMA</u>	Albemarle Catalysts Company BV

15:50-16:30 Chair: *J. Runnacles (Lucite International UK) and R. Iwamoto (Idemitsu Kosan)*

OB107	15:50	Recent progress in refinery alkylation: Premium octane blends from safer catalytic processes	<u>Dan FRAENKEL</u>	Rolier Technologies LLC
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OB108	16:10	Oxidative Dehydrogenation of Isobutane on Mesoporous Silica Catalysts Introduced with Binary Metallic Cations	Yuki KATO, Shinya NITTA, Kenta ORIBE, Masahiro KATOH, Wataru NINOMIYA, Shigeru SUGIYAMA	Mitsubishi Chemical Corporation, Tokushima University
16:30-16:50 Coffee break				
16:50-18:10 Chair: X. Rong (Nanyang Tech. Univ.) and H. Seki (JXTG Nippon Oil&Energy)				
KB109	16:50	Catalyst Design and Development for a Novel Methyl Methacrylate Process	John RUNNACLES	Lucite International UK Ltd
OB110	17:30	Titanium Species and Structure-performance Relationship in Boron-free Ti-MWW Zeolite Studied by UV Resonance Raman Spectroscopy	Shaoging JIN, Weimin YANG	SINOPEC Shanghai Research Institute of Petrochemical Technology
OB111	17:50	Zeolites for high selective C-O bond formation	Andrei-Nicolae PARVULESCU, Henrique J TELES, Markus WEBER, Nicolai WOERZ, Daniel URBANCZYK, Dominic RIEDEL, Ulrike WEGERLE, Ulrich MÜLLER	BASF SE

August 7, Tuesday

11:30-12:50 Chair: A. Urakawa (ICIQ) and S. Watanabe (Johnson Matthey)

OB201	11:30	Investigation of deactivation factor of CuCl ₂ -KCl/Al ₂ O ₃ catalyst for ethylene oxychlorination in commercial scale plant	Tomokazu OHASHI, Sae SOMEYA, Yoshihiko MORI, Tetsuo ASAKAWA, Makoto HANAYA, Motohiro OGURI, Ryo WATANABE, Choji FUKUHARA	Tosoh Corporation, Shizuoka University
OB202	11:50	The migration and re-distribution of Pt and their application in the activation of C-H bonds of ethane	Junjun SHAN, Hui WANG, John MATSUBU, Lisa NGUYEN, Yizhi XIANG, Fu-Kuo CHIANG, Jihong CHENG	NICE America Research Inc., Mississippi State University, NICE
KB203	12:10	Innovative process for carbonates from CO ₂	Budianto NISHIYAMA, Masaaki SHINOHATA, Nobuhisa MIYAKE	Asahi Kasei Corp.

12:50-14:30 Lunch

14:30-15:30 Chair: K. Motokura (Tokyo Inst. Tech.) and T. Aoki (Asahi Kasei)

OB204	14:30	Selective Oxidation and Oxidative Dehydrogenation of Ethane and Propane	Mohammed AL-HAZMI, Srikant GOPAL	SABIC
OB205	14:50	Ethylene oligomerization by novel iron (II) diimine complexes	Mingfang ZHENG	China Petroleum & Chemical Company (Sinopec Corp.)
IB206	15:10	Development of Strikingly Active Catalysts for the Selective Trimerization of Ethylene to 1-Hexene Based On FI Catalysts for Olefin Polymerization	Terunori FUJITA, Takashi NAKANO, Shinichiro ICHIKAWA, Seiichi ISHII	Mitsui Chemicals, Inc.

15:30-16:30 Chair: C. H. Kim (Hyundai) and M. Yabushita (Hokkaido Univ.)

OB207	15:30	Olefin shape-controlled polymerization with single-site catalyst inside the nanospace of metal-organic framework	Jeong Suk LEE, Ann Charise CARINO, Wha-Seung AHN, Young Soo KO	Kongju National University, Inha University
OB208	15:50	Reductive Alkylation of Amines with Carboxylic Ortho Esters	Renat KADYROV	Evonik Resource Efficiency GmbH
OB209	16:10	Dynamic observations of surface behavior of Rh nanoparticles under reaction conditions by environmental transmission electron microscopy	Hiromochi TANAKA, Masaaki IWASAKI, Shigeo ARAI, Hirohito HIRATA, Shunsuke MUTO	Toyota Motor Corporation, Toyota Central R&D Labs., Inc., Nagoya University

16:30-16:50 Coffee break

16:50-18:10 Chair: J. Shan (Nice America Research) and A. Satsuma (Nagoya Univ.)

KB210	16:50	Advancement of Environmental Catalysts to Improve "Real-World" Automotive Aftertreatment	Chang Hwan KIM	Hyundai
OB211	17:30	Experimental and computational studies about CO-NO reaction mechanism on rhodium nanoparticle for three way catalyst	Yasuhiro MATSUMURA, Yuki KODA, Hiroshi YAMADA, Masahiko SHIGETSU, Hiroshi KUBOTA, Takayoshi ISHIMOTO, Hiroyuki KAI	Mazda Motor Corporation, Hiroshima University
OB212	17:50	Understanding the selective dechlorination during adsorption of chlorinated ethylenes	Shingo WATANABE	Johnson Matthey

August 8, Wednesday

11:30-12:50 Chair: C. Fukuhara (Shizuoka Univ.) and Y. Nakasaka (Hokkaido Univ.)

OB301	11:30	Rh catalyst supported on core-shell structured Ce-Zr-Al oxide for steam reforming of toluene	Takahiro NISHIO, Hirokuni SETO, Kiyoshi YAMAZAKI, Yu LIN, Katsutoshi SATO, Katsutoshi NAGAOKA	DENSO CORPORATION, Toyota Central R&D Labs., INC, Oita University
OB302	11:50	CeO ₂ and CeO ₂ /MgO catalysts for steam and dry CH ₄ reforming under the influence of high concentrations of H ₂ S	Kenji TAIRA, Kenji NAKAO, Kimihito SUZUKI, Takeharu SUGIYAMA, Hisahiro EINAGA	Nippon Steel & Sumitomo Metal, Kyushu University

OB303	12:10	Development and application of high performance Ni catalyst using heat-resistant γ -alumina	Osamu OKADA, Kana MOTOMURA, Chika TAKADA, Itsuro KAWASAKO, Manami KAWANO, Akira HASEGAWA, Yoshihiro KADOMA	Renaissance Energy Research Corporation, National Institute of Technology, Hachinohe College
OB304	12:30	Selective sulfides removal in new make spirit using silver-exchanged zeolite Y	Narinobu KAGAMI, Mitsuko MURATA, Toshikazu SUGIMOTO, Kenji HOSOI	Idemitsu Kosan, Co., Ltd., The Nikka Whisky Distilling Co., Ltd.

12:50-14:30 Lunch

14:30-15:30 Chair: S. J. Cho (Chonnam National Univ.) and K. Sato (Kyoto Univ.)

OB305	14:30	Metal-support interactions in methanol synthesis catalysts	Jens SEHESTED, Kuld SEBASTIAN, Rishika CHATTERJEE, Max THORHAUGE, Hanne FALSIG, Poul Georg MOSES, Christian CONRADSEN, Christian ELKJAER, Roy VAN DEN BERG, Ib CHORKENDORFF, Stig HELVEG, Jakob M. CHRISTENSEN, Anker D. JENSEN	Haldor Topsoe A/S, University of Denmark
OB306	14:50	Beneficial Use of Natural Gas with Novel Catalysts	Kaori SEKINE, Masayuki FUKUSHIMA, Sadahiro KATO, Takashiro MUROI, Haruki IWAUCHI, Yuta NAKASAKA, Takuya YOSHIKAWA, Takao MASUDA	Furukawa Electric Co., Ltd., Industrial Catalysts Laboratory, Hokkaido University
OB307	15:10	Improved Fischer-Tropsch catalysts guided by learnings from deactivation studies	Stuart L. SOLED, Sebastian REYES, Chris KLIOWER, Gabor KISS, Sal MISEO	ExxonMobil Research and Engineering Co

15:30-16:30 Chair: C. Lamonier (Univ. Lille) and S. Ogo (Waseda Univ.)

OB308	15:30	3D printing of NiMo-based catalysts for conversion of syngas into higher alcohols	Waqas ASLAM, Jorge BELTRAMINI, Victor RUDOLPH, Muxina KONAROVA	The University of Queensland
OB309	15:50	Catalyst design for controlled methanol-to-olefin reaction selectivity and catalyst life of high silica zeolites, FER and CHA by selective CeO ₂ coating	Sung Jun PARK, Hoi-Gu JANG, Sung June CHO	Chonnam National University
OB310	16:10	High throughput testing of catalysts with fast deactivation for Methanol-to-Hydrocarbons (MTH)	Marius KIRCHMANN, Christoph HAUBER, Alfred HAAS	hte GmbH

16:30-16:50 Coffee break

16:50-18:10 Chair: S. L. Soled (ExxonMobil Research Engineering) and N. Kagami (Idemitsu Kosan)

OB311	16:50	KMo alumina supported catalysts for the direct synthesis of methyl mercaptan from syngas and H ₂ S under industrial reactions conditions	Helori SALEMBIER, Carole LAMONIER, Pascal BLANCHARD, Christine LANCELOT, Georges FREMY	The University of Lille, ARKEMA GRL
OB312	17:10	Scaled-up catalytic growth of ultra-long carbon nanotubes in the form of macro spools	Vladimir Z. MORDKOVICH, Aida R. KARAEVA, Nikita V. KAZENNOV, Ekaterina A. ZHUKOVA	Technological Institute for Superhard and Novel Carbon Materials, INFRA Technology Ltd.
IB313	17:30	Environmentally Friendly Heterogeneously Catalyzed Production of Lactide: 2nd Generation of PLA Process	Wolfgang F. HOELDERICH, Moritz VENSCHOTT	TCHK Hoelderich Cosultancy, RWTH Aachen
OB314	17:50	Catalytic Pyrolysis of Biomass by Tandem Micro-Reactor	Young-Min KIM, Atshushi WATANABE, Takashiro MUROI, Chuichi WATANABE, Norio TERAMAE	Hallym University, Frontier laboratories Ltd, Tohoku University, University of Seoul

August 9, Thursday

11:30-12:30 Chair: M. Lindblad (Neste) and T. Fujita (Mitsui Chemical)

OB401	11:30	Production of cellulose-derived olefins and applicability to gasoline	Yasuyo OKUYAMA, Mitsuru KOIKE, Masazumi TAMURA, Yoshinao NAKAGAWA, Akio IMAI, Keiichi TOMISHIGE	Showa Shell Sekiyu K.K., Tohoku University
OB402	11:50	Conversion of isobutanol into isobutylene by dehydration over alumina catalysts	Wataru NINOMIYA, Tatsuya SUZUKI, Akio TAKEDA, Toshiya YASUKAWA, Ken OYACHI	Mitsubishi Chemical Corporation
OB403	12:10	Nano-flowered Ce@MOR hybrids with modulated acid properties for the vapor-phase dehydration of 1,3-butanediol into butadiene	Lin FANG, Fangli JING, Jingya LU, Bingwen HU, Marc PERA-TITUS	Eco-Efficient Products and Processes Laboratory (E2P2L), Sichuan University, East China Normal University

12:30-13:30 Chair: M. Pera-Titus (Solvay) and T. Inoue (AIST)

OB404	12:30	HDO over ZrO ₂ -supported metal catalysts using γ -valerolactone as model feed	Susanna WALLENIOUS, <u>Marina LINDBLAD</u> , Kaisa LAMMINPAA, Mats KALDSTROM	Neste Corporation
OB405	12:50	Development of a Zirconia-Supported Palladium Catalyst for Decarbonylation of Furfural into Furan	Hideto TSUJI, Toru OKOSHI, Shohei TANIGUCHI, Yusuke IZAWA, Kohei TAKATANI, Takayuki AOSHIMA	Mitsubishi Chemical Corp.
OB406	13:10	Outmost surface analysis of Pd-Au nanocolloid for synthesis of high concentration H ₂ O ₂ by direct oxidation of H ₂	Tatsumi ISHIHARA, Kenta MURAO, Kohei MURAKAMI, Atsushi INOISHI	Kyushu University, International Institute for Carbon Neutral Energy Research

August 10, Friday

9:00-10:00 Chair: X. Chia (Nanyang Tech. Univ.) and T. Murayama (Tokyo Metropolitan Univ.)

IB501	9:00	Ammonia synthesis over Ru-supported Ca-N-H materials	Masaaki KITANO, Yasunori INOUE, Masato SASASE, Tomofumi TADA, Toshiharu YOKOYAMA, Michikazu HARA, Hideo HOSONO	Tokyo Institute of Technology
OB502	9:20	Enhanced functionality of Al-rich zeolite beta catalysts in industrially relevant acid- and redox-catalysed reactions	Petr SAZAMA, Radim PILAR, Vasile PARVULESCU, Galina SADOVSKA, Jaroslava MORAVKOVA, Dalibor KAUCKY, Jana PASTVOVA, Stepan SKLENAK, Alena VONDROVA	J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences, University of Bucharest
OB503	9:40	Immobilized Metal Nanoparticles Containing Ionic Liquids on SBA-15: Preparation and Application in Catalysis	Etty N. KUSUMAWATI, Takehiko SASAKI	The University of Tokyo

10:00-11:00 Chair: W. Ji (Nanjing Univ.) and M. Kitano (Tokyo Inst. Tech.)

OB504	10:00	In-situ Metallic Nanoparticles Exsolution on Perovskite Parent Driven by Crystal Reconstruction	Jianhui LI, Yifei SUN, Jingli LUO	Xiamen University, Alberta University
OB505	10:20	Designing Rooted Ni#Y ₂ O ₃ Catalyst for Low-temperature Dry Reforming of Methane	Xiaobo PENG, Shusaku SHOJI, Masahiro MIYAUCHI, Takeshi FUJITA, Hideki ABE	National Institute for Materials Science, Tokyo Institute of Technology, Tohoku University
IB506	10:40	Temperature-Dependent Activation Properties for Carbon Monoxide Oxidation by Polyoxometalate-Supported Gold Nanoparticulate Catalysts	Toru MURAYAMA, Takuya YOSHIDA, Mingyue LIN, Norihito SAKAGUCHI, Tamao ISHIDA, Masatake HARUTA	Tokyo Metropolitan University, Hokkaido University

11:00-11:30 Coffee break

11:30-12:50 Chair: J. Li (Xiamen Univ.) and N. Katada (Tottori Univ.)

OB507	11:30	Copper-based Intermetallic Electride Catalyst for Chemoselective Hydrogenation Reactions	Tian-Nan YE	Tokyo Institute of Technology
OB508	11:50	Unique Au/ α -Fe ₂ O ₃ interfacial structures and their distinct catalytic behaviours in low-temperature CO oxidation and water gas shift reaction	Weijie JI, Lingli GU, Qin SU, Wu JIANG, Yao YAO, Chak-Tong AU	Nanjing University, Hong Kong Baptist University
OB509	12:10	M _x Ce _{1-x} O _{2-y} nanoparticles (M = noble metal) deposited on functionalized alumina as highly active and stable combustion catalysts	Karolina A. LEDWA, Leszek KEPINSKI	Polish Academy of Sciences
OB510	12:30	Emerging trends in electrochemistry and electrocatalysis of platinum dichalcogenides: Towards activation for charge transfer and hydrogen evolution	Xinyi CHIA, Adriano AMBROSI, Petr LAZAR, Zdenek SOFER, Jan LUXA, Martin PUMERA	Nanyang Technological University, Palacky University Olomouc, University of Chemistry and Technology Prague

Room C

August 6, Monday

11:30-12:50 Chair: B. M. Bhanage (Inst. Chem. Tech.) and K. Motokura (Tokyo Inst. Tech.)

OC101	11:30	Visible light-driven building C-C bonds from CO ₂ as a feedstock with photosensitizer-biocatalyst hybrid system	Yutaka AMAO, Takayuki KATAGIRI, Shusaku IKEYAMA	Osaka City University
OC102	11:50	Biocatalytic transformation of bioglycerol to diols	Roopa D PARATE, Mahesh S DHARNE, Chandrashekhar V RODE	CSIR-National Chemical Laboratory
OC103	12:10	Enzyme one-pot system for the construction of artificial lignin-based composites	Madalina TUDORACHE	University of Bucharest
OC104	12:30	Ultrasound accelerated the enzymatic synthesis of ethyl hexanoate in a solvent free system	Virendra RATHOD, Sarita GAWAS	Institute of Chemical Technology

12:50-14:30 Lunch

14:30-15:30 Chair: Y. Amao (Osaka City Univ.) and R. Miura (Tohoku Univ.)

IC105	14:30	Concerted Catalysis of Pd Complex on Mesoporous Silica Surface for Acceleration of Allylation of Nucleophiles	Ken MOTOKURA, Marika IKEDA, Masayuki NAMBO, Wang-Jae CHUN, Kiyotaka NAKAJIMA, Shinji TANAKA	Tokyo Institute of Technology, International Christian University, Hokkaido University, National Institute of Advanced Industrial Science and Technology
OC106	14:50	Rhodium catalyzed pH Dependent Asymmetric Transfer Hydrogenation of Imines in Water with Formic acid-Triethylamine as Hydrogen Donor	Vaishali S. SHENDE, Ashutosh A. KELKAR, Bhalchandra M. BHANAGE	Institute of Chemical Technology, CSIR-National Chemical Laboratory
OC107	15:10	Highly selective allylation from allyl alcohol using supported molybdenum oxide on titania catalyst	Yoshihiro KON, Akira YADA, Tadahiro FUJITANI, Takuya NAKASHIMA, Yoichi NAKAMURA, Toru MURAYAMA, Wataru UEDA	National Institute of Advanced Industrial Science and Technology (AIST), Hokkaido University, Tokyo Metropolitan University, Kanagawa University
15:30-16:30 Chair: E. Tabor (J. Heyrovsky Inst. Phys. Chem.) and Y. Kuwahara (Osaka Univ.)				
IC108	15:30	Supramolecular multi-nuclear cluster catalysts for alternating copolymerization of epoxide and CO ₂ : unique telomerization by carboxylate anions	Kazushi MASHIMA, Haruki NAGAE, Ryota AOKI, Shin-nosuke AKUTAGAWA, Hayato TSURUGI, Tobias SCHINDLER, Julian KLEEMANN, Thomas P. SPANIOL, Jun OKUDA	Osaka University, RWTH Aachen University
OC109	15:50	Fabrication of uniform rod-like polypropylene particles by Stober silica supported metallocene / MAO catalysts	Kuo-Tseng LI, Cheng-Ni YANG	Tunghai University
OC110	16:10	Development of Molecular Dynamics Method to Simulate Polymerization Process with Metallocene Catalyst	Ryuji MIURA, Masayuki MIYANO, Ai SUZUKI, Naoto MIYAMOTO, Nozomu HATAKEYAMA, Akira MIYAMOTO, Tossapol KHAMNAEN, Sumate CHAROENCHAIDET	Tohoku University, SCG Chemicals Company Limited
16:30-16:50 Coffee break				
16:50-18:10 Chair: K.-T. Li (Tunghai Univ.) and Y. Kon (AIST)				
OC111	16:50	High-density immobilization of molybdenum complex on BPy-PMO and its catalysis for epoxidation of olefins	Yoshifumi MAEGAWA, Satoshi ISHIKAWA, Minoru WAKI, Shinji INAGAKI	Toyota Central R&D Labs., Inc., Kanagawa University
OC112	17:10	Exploring Oxidation States of the Catalytically Active Species in Ethylene Polymerization/Dimerization Using (Imido)vanadium(V) Complex Catalysts	Kotohiro NOMURA, Takato MITSUDOME, Atsushi IGARASHI, Mari OSHIMA, Go NAGAI	Tokyo Metropolitan University, Osaka University
OC113	17:30	Presence of two close protons as key factor for propene oligomerization over H-ZSM-5 zeolites	Edyta TABOR, Milan BERNAUER, Veronika PASHKOVA, Zdenek SOBALIK, Blanka WICHTERLOVA	J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
OC114	17:50	Hollow silica spheres encapsulating Pd nanoparticles and aminopolymers as nanoreactors for semihydrogenation of alkynes	Yasutaka KUWAHARA, Hiroto KANGO, Hiromi YAMASHITA	Osaka University, Kyoto University

August 7, Tuesday

11:30-12:50 Chair: K. C.-W. Wu (National Taiwan Univ.) and T. Kubota (Shimane Univ.)

OC201	11:30	Dealkylation of alkyl polycyclic aromatic hydrocarbons in vacuum gas oil	Fumiya NAKANO, Keisuke KINUGASA, Satoshi SUGANUMA, Etsushi TSUJI, Naonobu KATADA	Tottori University
OC202	11:50	Oxygen-assisted partial hydrogenation of biodiesel fuel over an alumina-supported palladium catalyst to produce hydrotreated fatty acid methyl esters	Takehisa MOCHIZUKI, Shih-Yuan CHEN, Yohko ABE, Makoto TOBA, Hidekiyu TAKAGI, Yuji YOSHIMURA	National Institute of Advanced Industrial Science and Technology
OC203	12:10	A systematic study of isomorphically substituted H-MeAIP0-5 materials for the Methanol to Hydrocarbons (MTH) reaction	Magnus MORTEN, Lukasz MENTEL, Andrea LAZZARINI, Ilija PANKIN, Carlo LAMBERTI, Silvia BORDIGA, Valentina CROCELLA, Stian SVELLE, Karl Petter LILLERUD, Unni OLSBYE	University of Oslo, University of Turin, Southern Federal University
OC204	12:30	Designing MoS ₂ nanocatalysts with high exposure of active edge sites for anthracene hydrogenation reaction	Dongge WANG, Yuxia JIANG, Jiahe LI, Min LI, Zhendong PAN, Huajun MA, Guang LV, Wei QU, Lin WANG, Zhijian TIAN	Dalian Institute of Chemical Physics

12:50-14:30 Lunch

14:30-15:30 Chair: S. Kawi (National Univ. Singapore) and H. Yamashita (Osaka Univ.)

KC205	14:30	Direct oxygen insertion to C-H bond by enzyme-mimic copper complexes	<u>Chung-Yuan MOU</u>	National Taiwan University
IC206	15:10	Emerging Catalytic Light Olefin Production Technologies	Na Young KANG, Won Choon CHOI, Yong-Ki PARK	Korea Research Institute of Chemical Technology
15:30-16:30 Chair: J. Panpranot (Chulalongkorn Univ.) and Y. Amai (Osaka City Univ.)				
IC207	15:30	Catalytic production of chiral polyols using deoxydehydration of methyl glycosides over ReOx-Pd/CeO ₂ without protecting OH groups	<u>Keiichi TOMISHIGE</u>	Tohoku University
IC208	15:50	Triglycerides-based Feeds Deoxygenation over SiO ₂ -Al ₂ O ₃ Supported NiO-CaO Catalysts for Production of Diesel-like Fuel	<u>Yun Hin TAUFIQ-YAP</u> , Nurul Asikin MIJAN, Hwei Voon LEE	Universiti Putra Malaysia, University Malaya
IC209	16:10	Catalytic Selectivity Engineering in Conversion of Biomass and Waste into Value Added Chemicals, Materials and Energy	<u>Ganapati D. YADAV</u>	Institute of Chemical Technology
16:30-16:50 Coffee break				
16:50-18:10 Chair: J. C.-S. Wu (National Taiwan Univ.) and K. Tomishige (Tohoku Univ.)				
KC210	16:50	A Significant Enhancement of Catalytic Properties by Adjusting Catalyst Wettability	<u>Fengshou XIAO</u>	Zhejiang University
KC211	17:30	Tungsten dispersion and coke reduction on metathesis catalyst for propene production	<u>Piyasan PRASERTHDAM</u> , Surasa MAKSASITHORN, Wimonrat LIMSANGKASS, Narongrat POOVARAWAN	Chulalongkorn University

August 8, Wednesday

11:30-12:50 Chair: W.-Y. Yu (National Taiwan Univ.) and K. Yamaguchi (Univ. Tokyo)

OC301	11:30	Low-temperature oxidative coupling of methane over various cerium-based catalysts in the electric field	<u>Ayaka SATO</u> , Shuhei OGO, Keigo KAMATA, Michikazu HARA, Tomohiro YABE, Yasushi SEKINE	Waseda University, Japan Science and Technology Agency (JST), Tokyo Institute of Technology
OC302	11:50	Acceleration of Electron Transfer at Interfaces of Solid Semiconductors under Microwave Irradiation	<u>Yuiji WADA</u> , Shuntaro TSUBAKI, Fuminao KISHIMOTO	Tokyo Institute of Technology
OC303	12:10	Titanium-based hydrides for ammonia synthesis	<u>Yoji KOBAYASHI</u> , Naoya MASUDA, Ya TANG, Toki KAGEYAMA, Yoshinori UCHIDA, Hiroki YAMASHITA, Hiroshi KAGEYAMA	Kyoto University, JST-CREST
IC304	12:30	Wool-like Au, Pt, Pd, Ag, or Cu electrodes as active catalysts for ammonia synthesis in nonthermal atmospheric-pressure plasma of N ₂ and H ₂	<u>Masakazu IWAMOTO</u> , Mao AKIYAMA, Keigo AIHARA, Takashi DEGUCHI	Waseda University, Chuo University, Tokyo Inst. Technology

12:50-14:30 Lunch

14:30-15:30 Chair: F. Dean Toste (UC Berkeley) and Y. Nakagawa (Tohoku Univ.)

OC313	14:30	Tandem Catalytic Synthesis of Benzene from CO ₂ and H ₂	<u>Guoqun LIU</u> , Guohui YANG, Yoshiharu YONEYAMA, Noritatsu TSUBAKI	University of Toyama
OC314	14:50	A general and sustainable C-methylation of alcohols, ketones and indoles with methanol by heterogeneous platinum catalyst	<u>S. M. A. Hakim SIDDIKI</u> , A. Sultana TOUCHY, Takashi TOYAO, Ken-ichi SHIMIZU	Hokkaido University
OC306	15:10	Catalysis at the interfaces: a DFT study	<u>Gang FU</u>	Xiamen University

15:30-16:30 Chair: G. Fu (Xiamen Univ.) and H. Iida (Kogakuin Univ.)

OC307	15:30	Development of Methanol Synthesis Catalyst by Means of Materials Informatics	<u>Kohji OMATA</u> , Takeshi KUBOTA, Kaoru FUJIMOTO	Shimane University, HiBD Institute
OC308	15:50	Microstructure and Catalysis in Porous Ag and Ag-Mg Alloys	<u>Min-Hong LIU</u> , Satoshi KAMEOKA, Kazue NISHIMOTO, An-Pang TSAI	Tohoku University
OC309	16:10	Atomically dispersed M-N-C catalyst for green organic transformations	Wengang LIU, Leilei ZHANG, Aiqin WANG, Tao ZHANG	Dalian Institute of Chemical Physics

16:30-16:50 Coffee break

16:50-18:10 Chair: A. Wang (Dalian Inst. Chem. Phys.) and K. Kamata (Tokyo Inst. Tech.)

KC310	16:50	Catalysis in Confined Spaces	<u>F. Dean TOSTE</u>	UC Berkeley
OC311	17:30	Activation of N-N bond by surface protonics on Ru-support interface for ammonia synthesis at low temperature	<u>Kota MURAKAMI</u> , Ryo MANABE, Shuhei OGO, Tomohiro YABE, Hideaki TSUNEKI, Masatoshi IKEDA, Atsushi ISHIKAWA, Hiromi NAKAI, Yasushi SEKINE	Waseda University, Nippon Shokubai, National Institute of Materials Science
IC312	17:50	Synthesis of phenols and anilines through acceptorless dehydrogenative aromatization catalysis over supported Pd nanoparticles	<u>Kazuuya YAMAGUCHI</u>	The University of Tokyo

August 9, Thursday

9:00-12:30 Chair: A. Katz (Univ. California) and M. Hara (Tokyo Inst. Tech.)

KC401	11:30	Hybrid catalysis as the next challenge in biorefineries: concept and examples	Franck DUMEIGNIL, Alexandra GIMBERNAT, Marie GUEHL, Mickael CAPRON, Nicolas LOPES FERREIRA, Renato FROIDEVAUX, Jean-Sebastien GIRARDON, Pascal DHULSTER, Damien DELCROIX	Universite de Lille, IFP Energies Nouvelles
OC402	12:10	Distinct Characteristics of Hydrogenation and Hydrodeoxygenation on Anatase TiO ₂ Supported Au Catalysts	Z. Conrad ZHANG, Jingbo MAO, Zhi XIA, Zhiguang WANG, Zhanwei XU, Peifang YAN, Kairui LIU, Xinwen GUO	Dalian Institute of Chemical Physics, Dalian University of Technology, Dalian University
12:30-13:30 Chair: F. Dumeignil (Lille Univ.) and M. Machida (Kumamoto Univ.)				
OC403	12:30	Unexpected properties of supported Copper catalysts	Federica ZACCHERIA, Rinaldo PSARO, Nicola SCOTTI, Nicoletta RAVASIO	CNR ISTM
KC404	12:50	On route to understanding ligand control of catalysis on supported cluster surfaces	Alexander Katz	University of California

August 10, Friday

9:00-10:00 Chair: D. H. Kim (Seoul National Univ.) and H. Asakura (Kyoto Univ.)

OC501	9:00	Kinetic study of the reactivity of lignin model compounds towards H-transfer hydrogenolysis under hydrothermal conditions	Nolven GUILHAUME, Xavier BESSE, Yves SCHUURMAN	IRCELYON-CNRS
OC502	9:20	Chemoselective syntheses of nitrogen-containing compounds from unsaturated nitro compounds by Ni-Sn alloy catalysts	Nobutaka YAMANAKA, Takayoshi HARA, Nobuyuki ICHIKUNI, Shogo SHIMAZU	Chiba university
OC503	9:40	Selective catalytic reduction of NO _x with NH ₃ over Mo-based catalysts	Zhiming LIU, Guoliang QI, Zizheng ZHOU	Beijing University of Chemical Technolog
10:00-11:00 Chair: Y. Sekine (Waseda Univ.) and J. Hirayama (Hokkaido Univ.)				
OC504	10:00	NO _x oxidation and storage reaction over Sr-Fe mixed oxides	Kazuki TAMAI, Saburo HOSOKAWA, Hiroyuki ASAKURA, Kentaro TERAMURA, Tsunehiro TANAKA	Kyoto University
OC505	10:20	Deactivation of exhaust aftertreatment catalysts for heavy-duty vehicles - influence of sulfur on the activity and selectivity of Cu-SSZ-13 SCR catalysts	Sandra A. DAHLIN, Johanna ENGLUND, Comelia LANTTO, Bjorn WESTERBERG, Francesco REGALI	KTH Royal Institute of Technology, Chalmers University of Technology, LTU Lulea University of Technology, Scania CV AB
OC506	10:40	Passive NO adsorption ability of hydrothermally activated Pd/SSZ-13 for cold start application	YoungSeok RYOU, Jaeha LEE, Hyokyung LEE, Chang Hwan KIM, Do Heui KIM	Seoul National University, Hyundai-Kia Motors R&D center

11:00-11:30 Coffee break

11:30-12:50 Chair: Z. Liu (Beijing Univ. Chem. Tech.) and K. Tomishige (Tohoku Univ.)

OC507	11:30	Seed-assisted solvent-free synthesis of Cu-SSZ-13 with high hydrothermal stability for NH ₃ selective catalytic reduction of NO _x	Yulong SHAN, Hong HE, Xiaoyan SHI, Yunbo YU	Research Center for Eco-Environmental Sciences, University of Chinese Academy of Sciences, Institute of Urban Environment
OC508	11:50	Catalytic reduction of nitrate in water toward purification of real groundwater	Jun HIRAYAMA, Yi WANG, Ryoichi OTOMO, Yuichi KAMIYA	Hokkaido University
OC509	12:10	Structural manipulation of manganese oxides for enhanced catalytic decomposition of ozone	Jian JI, Shuilian LIU, Yi YU, Haibao HUANG	Sun Yat-Sen University
OC510	12:30	Selective Catalytic Oxidation of Ammonia over Au/Nb ₂ O ₅ at Room Temperature	Mingyue LIN, Baoxiang AN, Nao NIIMI, Yohei JIKIHARA, Tsuruo NAKAYAMA	Tokyo Metropolitan University, NBC Meshtec Inc.

Room D**August 6, Monday**

11:30-12:50 Chair: Y. Wang (Xiamen Univ.) and K. Shimizu (Hokkaido Univ.)

ID101	11:30	Design of heterogeneous nanocatalysts for the synthesis/decomposition of formic acid: a renewable hydrogen storage/delivery mediating carbon dioxide	Kohsuke MORI, Shinya MASUDA, Hiromi YAMASHITA	Osaka University, JST PRESTO, Kyoto University
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OD102	11:50	Synergistic effect of a boron-doped carbon-nanotube-supported Cu catalyst for selective hydrogenation of dimethyl oxalate to ethanol	Peipei AI, Guohui YANG, Yoshiharu YONEYAMA, Noritatsu TSUBAKI	University of Toyama
KD103	12:10	Catalysis for upgrading C1 feedstocks	Aditya BHAN, Anurag KUMAR	University of Minnesota Twin Cities
12:50-14:30 Lunch 14:30-15:30 Chair: A. Tanksale (Monash Univ.) and K. Shimizu (Hokkaido Univ.)				
KD104	14:30	Stability of CO hydrogenation catalysts studied in-situ	Michael CLAEYS	University of Cape Town
OD105	15:10	Catalytic applications of highly crystalline seed-derived ferrierite zeolite for syngas conversion to value-added chemicals	Jong Wook BAE, Jihyeon KIM, Hyungwon HAM	Sungkyunkwan University (SKKU)
15:30-16:30 Chair: A. Bhan (Univ. Minnesota Twin Cities) and K. Mori (Osaka Univ.)				
OD106	15:30	Mechanistic insight of CO ₂ methanation on hydrotalcite-derived catalysts by operando XAS and XES spectroscopy	Rafal BARAN	European Synchrotron Radiation Facility
KD107	15:50	Development of new syngas conversion routes beyond Fischer-Tropsch synthesis	Ye WANG	Xiamen University
16:30-16:50 Coffee break 16:50-18:10 Chair: M. Claeys (Univ. Cape Town) and N. Tsubaki (Univ. Toyama)				
OD108	16:50	High catalytic activity of isolated Pt atoms of Ni-Pt alloy for CO ₂ hydrogenation	Soichi KIKKAWA, Kentaro TERAMURA, Hiroyuki ASAKURA, Saburo HOSOKAWA, Tsunehiro TANAKA	Kyoto University
OD109	17:10	Nanostructured catalysts for carbon dioxide conversion	Zhou-jun WANG, Yu GUO, Jinwei SUN	Beijing University of Chemical Technology, National Institute for Materials Science (NIMS)
KD110	17:30	One-pot conversion of carbon oxides into formaldehyde and its derivatives in liquid phase reactions	Aksha TANKSALE	Monash University

August 7, Tuesday

11:30-12:50 Chair: F. Bellot Noronha (National Inst. Tech.) and R. Kikichi (Univ. Tokyo)

OD201	11:30	Catalysts prepared by using the sol-gel method and their pretreatments for direct synthesis of dimethyl ether	Kaoru TAKEISHI, Toshiki KISHI	Shizuoka University
OD202	11:50	Selective CO methanation in the reformat gas over Ni-, Co- and Fe/CeO ₂ catalysts: tuning catalyst activity and selectivity	Margarita V. KONISHCHEVA, Dmitry I. POTEMKIN, Pavel V. SNYTIKOV, Vladimir A. SOBYANIN	EFCOM LLC, Novosibirsk State University, Boreskov Institute of Catalysis SB RAS
OD203	12:10	CO ₂ hydrogenation into methanol over Cu/Zn/Zr catalysts prepared by a surfactant-assisted co-precipitation followed reflux in one-step method	Francielle Candian MARCOS, Marco Aurelio ROSSI, Jose Mansur ASSAF, Reinaldo GIUDICI, Elisabete Moreira ASSAF	University of Sao Paulo, Federal University of Sao Carlos
OD204	12:30	CO cleanup of H ₂ -rich reformat by preferential CO methanation over nickel-ceria catalysts: from mechanistic studies to catalyst and reactor design	Pavel V. SNYTIKOV, Margarita V. KONISHCHEVA, Dmitry I. POTEMKIN, Vladimir A. SOBYANIN	EFCOM LLC, Boreskov Institute of Catalysis, Novosibirsk State University

12:50-14:30 Lunch

14:30-15:30 Chair: S. Ogo (Waseda Univ.) and M. Tamura (Tohoku Univ.)

OD205	14:30	Ni-doped high surface area spherical silica catalysts for CO ₂ methanation	Sasithorn KUHAUDOMLAP, Okorn MEKASUWANDUMRONG, Piyasan PRASERTHDAM, Joongjai PANPRANOT	Chulalongkorn University, Silpakorn University
OD206	14:50	Hydrogen generation through partial oxidation of ethanol or methane over supported well-defined Pt, Rh, and Ru nanoparticles	V.A. KONDRATENKO, A. MALMUSI, U. RODEMERCK, U. KARIMOVA, A.A. KASIMOV, F. CAVANI, E.V. KONDRATENKO	Leibniz Institute for Catalysis e. V., University of Bologna, Institute of Petrochemical Processes
ID207	15:10	Catalyst development for hydrogen production through steam reforming of ethanol: from laboratory scale to pilot plant	Raimundo RABELO-NETO, Tamara SIQUEIRA MORAES, Fabio BELLOT NORONHA	National Institute of Technology

15:30-16:30 Chair: C. Geantet (IRCELYON) and K. Takeishi (Shizuoka Univ.)

OD208	15:30	Molecular dynamics simulation of water dynamics at the water/solid interface of ceria-supported Pt clusters	<u>Lucie SZABOVA</u> , Matteo FARNESI CAMELLONE, Fabio NEGREIROS RIBEIRO, Yoshitaka TATEYAMA, Stefano FABRIS	NIMS, CNR-IOM DEMOCRITOS
ID209	15:50	CO ₂ reforming of methane over nickel catalysts supported on La _x Sr _{1-x} TiO _{3-δ}	<u>Ryuji KIKUCHI</u> , Shiori SEKI, Atsushi TAKAGAKI, S. Ted OYAMA	The University of Tokyo, Virginia Tech
OD210	16:10	Heterogenization of Pt complexes inside Metal Organic Frameworks using facile Postsynthetic Modification for visible-light driven hydrogen evolution	<u>Zakary LIONET</u> , Shinya MINE, Yu HORIUCHI, Masaya MATSUOKA	Osaka Prefecture University

16:30-16:50 Coffee break

16:50-18:10 Chair: T. Toyao (Hokkaido Univ.) and S. Tsubaki (Tokyo Inst. Tech.)

ID211	16:50	Alkylation of isobutane with butenes using OSDA-free zeolite Beta	<u>Dirk DE VOS</u> , Patrick TOMKINS, Trees DE BAERDEMAEKER, Bernd MARLER, Hermann GIES, Weiping ZHANG, Toshiyuki YOKOI, Xiulian PAN, Xinhe BAO, Xiangju MENG, Feng-Shou XIAO, Ute KOLB, Robert McGUIRE, Ulrich MÜLLER	KU Leuven, Ruhr-University Bochum, Dalian University of Technology, Tokyo Institute of Technology, Dalian Institute of Chemical Physics, Zhejiang University, University of Mainz, TU Darmstadt, BASF SE
OD212	17:10	Methanolysis of ammonia borane over supported AuPd alloy catalyst	<u>Mitsuhiro TOMINAGA</u> , Kengo NAKAJIMA, Hiroki MIURA, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
OD213	17:30	Catalytic hydroconversion of bio-oils : preventing macromolecules formation by solvent effect	<u>Matthieu OZAGAC</u> , Celine BERTHINO-GHERA, Denis UZIO, Dorothee LAURENTI, <u>Christophe GEANTET</u>	Universite de Lyon, IFP Energies Nouvelles
OD214	17:50	First direct observation on the degradation of both Pt catalyst and carbon in MEA Pt/C cathode by the same-view nano-XAFS/STEM-EDS imaging technique	<u>Shinobu TAKAO</u> , Oki SEKIZAWA, Gabor SAMJESKE, Takuma KANEKO, Tomohiro SAKATA, Kotaro HIGASHI, Takashi YAMAMOTO, Tomoya URUGA, Yasuhiro IWASAWA	The University of Electro-Communications, The University of Tokushima, SPring-8

August 8, Wednesday

11:30-12:50 Chair: S. Perathoner (Univ. Messina) and Y. Nabee (Tokyo Inst. Tech.)

OD301	11:30	Oxygen reduction reaction of Pt/Ti ₄ O ₇ nanoparticles	<u>Dai MOCHIZUKI</u> , Jun FUKUSHIMA, Tomohiro OHNISHI, Daisuke TAKIMOTO, Hirotsugu TAKIZAWA, Wataru SUGIMOTO	Shinshu University, Tohoku University
OD302	11:50	Highly Stable Oxygen Evolution Electrocatalysts Achieved by Surface Protection with a Permselective CeO _x Layer	<u>Keisuke OBATA</u> , Kazuhiro TAKANABE	King Abdullah University of Science and Technology, The University of Tokyo
OD303	12:10	Modification of Pt/C with various metal oxides improving catalytic activity for alkaline hydrogen oxidation	<u>Keiichi OKUBO</u> , Junya OHYAMA, Atsushi SATSUMA	Nagoya University
OD304	12:30	Emergence of oxygen reduction activity of titanium oxide-based compounds as non-platinum cathode for PEFCs	<u>Akimitsu ISHIHARA</u> , Takaaki NAGAI, Yoshiyuki KURODA, Koichi MATSUZAWA, Hideto IMAI, Osamu SUGINO, Kunchan LEE, Shigenori MITSUSHIMA, Ken-ichiro OTA	Yokohama National University, NISSAN ARC,LTD, University of Tokyo, Showa Denko K.K.

12:50-14:30 Lunch

14:30-15:30 Chair: S. Specchia (Politecnico di Torino) and J. Ohyama (Nagoya Univ.)

OD305	14:30	Hollow mesoporous Fe-N-C graphitic spheres with excellent activity and stability for electrocatalytic oxygen reduction	<u>Jiacheng WANG</u> , Qian LIU	Shanghai Institute of Ceramics
OD306	14:50	Oxygen reduction reaction catalysis by Fe/N/C catalyst from polyimide nano-particles	<u>Yuta NABAE</u> , Shinsuke NAGATA, Tsutomu AOKI	Tokyo Institute of Technology

ID307	15:10	High Faradaic selectivity in the CO ₂ electrocatalytic reduction to formate over Cu ₂ O-Cu hybrid nanoparticles on gas-diffusion-layer electrode	<u>Siglinda PERATHONER</u> , Chiara GENOVESE, Francesco TAVELLA, Claudio AMPELLI, Maria Valnice BOLDRIN ZANONI, Gabriele CENTI, Juliana FERREIRA DE BRITO	University of Messina, Universidade Estadual Paulista
<i>15:30-16:30 Chair: Y.-C. Lin (National Cheng Kung Univ.) and D. Michizuki (Tokyo Denki Univ.)</i>				
OD308	15:30	Catalytic NH ₃ Combustion Properties of CuO _x /3Al ₂ O ₃ ·2SiO ₂	<u>Satoshi HINOKUMA</u> , Saaya KIRITOSHI, Yusuke KAWABATA, Kento ARAKI, Masato MACHIDA	Kumamoto University
OD309	15:50	Ammonia decomposition by heating of a single-mode microwave irradiation for rapid production of hydrogen	<u>Koichi SATO</u> , Masateru NISHIOKA, Akira MIYAZAWA, Aki MOURI, Kazuhiro TOYODA, Satoru HORIUCHI, Shoichi UEMATSU	National Institute of Advanced Industrial Science and Technology (AIST), Yazaki Research and Technology Center
ID310	16:10	Self-heating of Supported Ru Catalysts as a Trigger for Hydrogen Production by Ammonia Oxidative Decomposition from Room Temperature	<u>Katsutoshi NAGAOKA</u> , Suguru MATSUMOTO, Ryo TASAKI, Yuta OGURA, Katsutoshi SATO	Oita University, Kyoto University
<i>16:30-16:50 Coffee break</i>				
<i>16:50-18:10 Chair: S. Hinokuma (Kumamoto Univ.) and K. Nagaoka (Oita Univ.)</i>				
ID311	16:50	Internal Condensation Reactor for Methanol Production from Carbon Dioxide	<u>Kohji OMATA</u> , Hiroki MIYAHARA, Kenji ASAMI, <u>Kaoru FUJIMOTO</u>	Shimane University, The University of Kitakyusyu, HiBD Institute
OD312	17:10	A combination of silicon carbide and zirconia open cell foams coated with 3% Pd/Co ₃ O ₄ as structured catalysts for the lean combustion of methane	<u>Carmen W. MONCADA</u> QUINTERO, <u>Giuliana ERCOLINO</u> , <u>Stefania SPECCHIA</u>	Politecnico di Torino
KD313	17:30	Strategic Development of Catalyst-Membrane System for CO ₂ and Biomass Conversions	<u>Sibudjing KAWI</u>	National University of Singapore

August 9, Thursday

11:30-12:30 Chair: T. Shishido (Tokyo Metropolitan Univ.) and T. Ishihara (Kyusyu Univ.)

OD401	11:30	Modeling study of lignin catalytic hydroconversion in a semi-batch reactor	<u>Jujie PU</u> , Isabelle PITAULT, <u>Melaz TAYAKOUT</u> , Christophe GEANTET, Dorothee LAURENTI	University of Lyon
ID402	11:50	Modeling selective oxidation of hydrocarbons by V-based oxide	Torstein FJERMESTAD, Wenqing LI, Graham RUGG, Alexander GENEST, <u>Notker ROESCH</u>	Institute of High Performance Computing A*STAR, Technical University Munich
ID403	12:10	One-pot synthesis of ethylene glycol by oxidative hydration of ethylene with hydrogen peroxide over titanosilicate catalysts	<u>Peng WU</u> , Xinqing LU, Hao XU, Wenjuan ZHOU, Armin LIEBENS	East China Normal University, CNRS-Solvay
<i>12:30-13:30 Chair: P. Wu (East China Normal Univ.) and T. Mitsudome (Osaka Univ.)</i>				
OD404	12:30	Effect of support morphology and catalyst preparation on the selective oxidation activity of Au-Pd supported on nanostructured ceria	<u>Motaz KHAWAJI</u> , David CHADWICK	Imperial College London
OD405	12:50	Layered W-V oxides with M1 phase-like local structure for ammoxidation and selective oxidation of toluene	<u>Ken-ichi SHIMIZU</u> , Yoshinori GOTO, Takashi TOYAO, Toru MURAYAMA, Norihito HIYOSHI, Zhenxin ZHANG, Wataru UEDA	Hokkaido University, Tokyo Metropolitan University, National Institute of Advanced Industrial Science and Technology, Kanagawa University
OD406	13:10	Understanding NiO-MeO _x interactions in promoted and supported NiO-based catalysts for the ODH of ethane	<u>Daniel DELGADO</u> , Benjamin SOLSONA, Rut SANCHIS, Patricia CONCEPCION, Jose M. LOPEZ NIETO	Instituto Tecnologia Quimica, Universidad de Valencia

August 10, Friday

9:00-10:00 Chair: A. Gervasini (Univ. degli Studi di Milano) and Y. Kubota (Yokohama National Univ.)

OD501	9:00	Direct formation of 5-(hydroxymethyl)furfural from glucose with photoassist-phosphorylated TiO ₂ catalyst	<u>Masashi HATTORI</u> , Keigo KAMATA, Michikazu HARA	Materials and Structures Laboratory, Tokyo Institute of Technology
OD502	9:20	Co-feeding effect of H ₂ S on propane dehydrogenation performance of transition metal (Fe, Co, Ni) catalysts	<u>Nozomu HIRATA</u> , Yuya FUSHIMI, Yoshiumi KOHNO, Ryo WATANABE, Choji FUKUHARA	Shizuoka University

OD503	9:40	Liquid-phase alkylation of lignin-derived phenolics on solid acids: towards improved mechanistic understanding and process design	Hui SHI, Yuanshuai LIU, Meng WANG, Jianzhi HU, Donald M. CAMAIONI, Johannes A. LERCHER	TU Muenchen, Pacific Northwest National Laboratory
10:00-11:00 Chair: M. Yabushita (Hokkaido Univ.) and C. Fukuhara (Shizuoka Univ.)				
OD504	10:00	Effective acidities of catalysts based on Niobium Phosphate in relation with their catalytic activity in reactions of biomass conversion	Antonella GERVASINI, Paolo CARNITI, Claudio IMPARATO, Antonio ARONNE	Universita' degli Studi di Milano, Universita' di Napoli Federico II
OD505	10:20	Nature of the active sites of promoted tungstated zirconia catalysts	Martha Leticia HERNANDEZ-PICHARDO, Ascencion MONTOYA, Paz DEL ANGEL	Instituto Politecnico Nacional, Instituto Mexicano del Petróleo
OD506	10:40	Acceptorless dehydrogenative synthesis of pyrimidines from amidine and alcohols by using a carbon-supported Pt catalyst	Sultana Sharmin POLY, S. M. A. Hakim SIDDIKI, Takashi TOYAO, Ken-ichi SHIMIZU	Hokkaido University
11:00-11:30 Coffee break				
11:30-12:50 Chair: H. Shi (TU Muenchen) and R. Watanabe (Shizuoka Univ.)				
OD507	11:30	Alkanal-Alkene Prins Condensation Reactions on Brønsted Solid Acids	Shuai WANG, Enrique IGLESIA	Xiamen University, University of California at Berkeley
OD508	11:50	Continuous Al migration from binder or supported aluminum into zeolite framework structure during methanol-to-propylene reaction	Junjie LI, Min LIU, Xinwen GUO, Chunshan SONG	Dalian University of Technology, Pennsylvania State University
OD509	12:10	Kinetic analysis of cyclic carbonate synthesis over methylated nitrogen-substituted SBA-15	Kiyoyuki YAMAZAKI, Takahiko MOTTEKI, Masaru OGURA	The University of Tokyo
OD510	12:30	Selective production of light olefins over MSE-type zeolite catalyst	Yoshihiro KUBOTA, Satoshi INAGAKI, Qiao HAN	Yokohama National University

Room E

August 6, Monday

11:30-12:50 Chair: C. Coperet (ETH Zurich) and T. Murayama (Tokyo Metropolitan Univ.)

KE101	11:30	Space- and time-resolved operando spectroscopic studies of heterogeneous catalysts under unsteady-state operations	Atsushi Urakawa	Institute of Chemical Research of Catalonia (ICIQ)
OE102	12:10	Construction of an <i>operando</i> dual-beam Fourier transform infrared spectrometer and its application in heterogeneous catalysis characterization	Jiaxu LIU, Qin XIN, Hongchen GUO	Dalian University of Technology, Dalian Institute of Chemical Physics
OE103	12:30	Nanoparticle Restructuring in Heterogeneous Catalysis: Effect of Particle Size and Reactant	Charlotte VOGT, Esther GROENEVELD, Maarten NACHTEGAAL, Raymond R UNOCIC, Florian MEIRER, Bert M WECKHUYSEN	Utrecht University, BASF Nederland B.V., Paul Scherrer Institute (PSI), Oak Ridge National Laboratory
12:50-14:30 Lunch				
14:30-15:50 Chair: J. Xu (Wuhan Unst. Phys. Math.) and R. Watanabe (Shizuoka Univ.)				
OE104	14:30	Characterizations of Pt/CeO ₂ during model redox sequences	G. FERRE, A. GAENZLER, F. MAURER, M. CASAPU, J.D. GRUNWALDT, M. AOUINE, T. EPICIER, F.J. CADETE SANTOS AIRE, C. GEANTET, S. LORIDANT, P. VERNOUX	University of Lyon, Karlsruhe Institute of Technology
OE105	14:50	Catalytic mechanism of Cu-based catalyst in methanol dehydrogenation	Weibin FAN	Institute of Coal Chemistry
KE106	15:10	Molecular understanding and controlled functionalization of surfaces towards single-site catalysts and beyond	Christophe COPERET	ETH Zurich
15:50-16:30 Chair: S. Dzwigaj (Sorbonne Univ.) and K. Asakura (Hokkaido Univ.)				
OE107	15:50	Modeling transformations catalyzed by a zeolite-supported Rh(I) complex	Alexander GENEST, Velina K MARKOVA, Graham RUGG, Sai V C VUMMALETI, Nishamol KURIAKOSE, Notker ROESCH	Institute of High Performance Computing A*STAR, Technical University Munich
OE108	16:10	In situ study of the deactivation of single-site gold catalyst during acetylene hydrochlorination using synchrotron radiation	Grazia MALTA	Cardiff University
16:30-16:50 Coffee break				
16:50-18:10 Chair: W. Fan (Inst. Coal Chem.) and A. Urakawa (ICIQ)				
OE109	16:50	Ultrafast XAFS Studies on the Photoabsorption Processes.	Kiyotaka ASAKURA, Yohei UEMURA, Toshihiko YOKOYAMA	Hokkaido University, Institute for Molecular Science

OE110	17:10	The dynamic changes of Mn species in MnSiBEA catalyst for NH ₃ -SCR under realistic conditions monitored by high resolution XAS spectroscopy	<u>Stanislaw DZWIGAJ</u> , Rafal BARAN	Sorbonne Universite, ESRF The European Synchrotron
OE111	17:30	Unrevealing the synergic site in metal modified ZSM-5 zeolite by solid state NMR spectroscopy	Jun XU, Guodong QI, Qiang WANG, Pan GAO, Feng DENG	Wuhan Institute of Physics and Mathematics
OE112	17:50	FeMo-based catalysts for acrolein production: An in situ X-ray Photoelectron Spectroscopy study	<u>Pardis SIMON</u> , Anne-Sophie MAMEDE, Martine TRENTESAUX, Anita BOROWIEC, Mickael CAPRON, Franck DUMEIGNIL, Jean-Jacques GALLET, Fabrice BOURNEL, Jean-Francois PAUL	Universite de Lille, Synchrotron-Soleil

August 7, Tuesday

11:30-12:50 Chair: K. Tomishige (Tohoku Univ.) and A. Nakayama (Hokkaido Univ.)

KE201	11:30	Photochemistry of doped metal oxides. Is there some hope for applications in visible-light photocatalysis?	<u>Elio Giamello</u>	University of Torino
OE202	12:10	Identification and detailed characterization of titania photocatalyst powders with their energy-resolved distribution of electron traps	<u>Bunsho OHTANI</u> , Akio NITTA, Mai TAKASHIMA, Mai TAKASE	Hokkaido University, Muroran Institute of Technology
OE203	12:30	Structure and catalytic behaviors of distinct Cu active sites over ceria surface	Liqun KANG, <u>Feng Ryan WANG</u>	University College London

12:50-14:30 Lunch

14:30-15:10 Chair: C. Mirodatos (IRCELYON) and T. Miyao (Yamanashi Univ.)

IE204	14:30	Cu immobilized on hierarchically porous N-doped carbon derived from ZIF-8 for oxy-carbonylation of methanol to dimethyl carbonate	<u>Youzhu YUAN</u> , Jinping ZHANG, Xiaoying LIU, Huihuang FANG, Xinpeng DUAN	Xiamen University
OE205	14:50	MIL-100(Fe) as catalyst precursor and host of gold nanoparticles for low temperature CO oxidation	<u>Lide OAR-ARTETA</u> , Demetrio GARZAS, Bart VAN DER LINDEN, Robert FRANZ, Jorge GASCON, Freek KAPTEIJN	Delft University of Technology, KAUST Catalysis Center

15:10-16:30 Chair: S. Kawi (National Univ. Singapore) and A. Yoshida (Hirotsaki Univ.)

KE206	15:10	Tailoring MOFs for CO ₂ hydrogenation reactions	<u>Unni Olsbye</u>	University of Oslo
OE207	15:50	Boosting catalytic performance of MOFs for steroid transformations by confinement within mesoporous scaffolds	<u>Francisco G. CIRUJANO</u> , Ignacio LUZ, Dirk DE VOS	KU Leuven, RTI International
IE208	16:10	From catalytic reaction mechanism to catalyst design: a valuable but complex pathway	<u>Claude MIRODATOS</u> , David FARRUSSENG, Nolven GUILHAUME, Frederic MEUNIER, Yves SCHUURMAN	IRCELYON-CNRS-Lyon University

16:30-16:50 Coffee break

16:50-18:10 Chair: Y. Yuan (Xiamen Univ.) and T. Furusawa (Utsunomiya Univ.)

OE209	16:50	Direct and versatile synthesis of metal-containing mesoporous silica nanoparticles for heterogeneous catalysis	<u>Chia-Min YANG</u> , Nien-Chu LAI, Ming-Chieh TSAI	National Tsing Hua University
OE210	17:10	Sandwiched Core-shell Ni-SiO ₂ @CeO ₂ catalyst for coke-free Dry Reforming of Methane: Performance & Mechanism Study	<u>Sonali DAS</u> , Ashok JANGAM, Nikita DEWANGAN, Kus HIDAJAT, Sibudjing KAWI	National University of Singapore
KE211	17:30	Functional Nanoporous Materials for Lignocellulosic Biomass Conversion	<u>Kevin C.-W. WU</u>	National Taiwan University

August 8, Wednesday

11:30-12:10 Chair: B.-Q. Xu (Tsinghua Univ.) and S. Yamazoe (Tokyo Metropolitan Univ.)

OE301	11:30	Design of Plasmonic Catalysts for Efficient H ₂ Production from Hydrogen Carrier Molecules	<u>Hiromi YAMASHITA</u> , Meicheng WEN, Priyanka VERMA, Haibo YIN, Hefeng CHENG, Yasutaka KUWAHARA, Kohsuke MORI	Osaka University, Kyoto University, JST
OE302	11:50	Improved ceria catalysts via doping and graphene oxide templating strategies	<u>Shawn C. ROOD</u> , Anais GOMEZ, Laura TORRENTE-MURCIANO, Tomas R. REINA, Salvador ESLAVA	University of Bath, University of Cambridge, University of Surrey

12:10-12:50 Break

12:50-14:30 Lunch

14:30-15:30 Chair: H. Ogihara (Saitama Univ.) and A. Takaqaki (Kyusyu Univ.)

OE304	14:30	Mesoporous zeolites as a high-performance catalyst support	<u>Jaeheon KIM</u> , Jongho HAN, Changbum JO, Jangkeun CHO, Ryong RYOO	Institute for Basic Science (IBS), KAIST
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IE305	14:50	Active sites for the electrocatalytic direct NH ₃ synthesis from N ₂ and H ₂ O at ambient temperature and pressure	Gabriele CENTI, Shiming CHEN, Siglinda PERATHONER, Claudio AMPELLI, Salvatore ABATE, Dangsheng SU	University of Messina, Dalian Institute of Chemical Physics
IE306	15:10	Oriented Au(111)/Graphene: an efficient catalyst for coupling reactions	Vasile I. PARVULESCU, Natalia CANDU, Simona M. COMAN, Cristian TEODORESCU, Ana PRIMO, Hermenegildo GARCIA	University of Bucharest, National Institute of Materials Physics, Instituto de Tecnologia Quimica
15:30-16:30 Chair: G. Centi (Univ. Messina) and H. Einaga (Kyusyu Univ.)				
IE307	15:30	Base catalytic application of polyanionic metal oxide clusters	Seiji YAMAZOE, Shun HAYASHI, Naoto SASAKI, Tatsuya TSUKUDA	The University of Tokyo, Kyoto University, Tokyo Metropolitan University
KE308	15:50	Selectivity control in acid-base catalysis for valorisation of biomass derivatives	Bo-Qing XU	Tsinghua University
16:30-16:50 Coffee break				
16:50-17:50 Chair: V. I. Parvulescu (Univ. Bucharest) and T. Nanba (AIST)				
IE309	16:50	Hexagonal Boron Nitride as a Solid Acid-Base Catalyst	Atsushi TAKAGAKI, Shusaku TORII, Keiko JIMURA, Shigenobu HAYASHI, Ryuji KIKUCHI, S. Ted OAYAMA	The University of Tokyo, National Institute of Advanced Industrial Science and Technology
IE310	17:10	Structural and catalytic properties of LaNiO ₃ and NiO/LaNiO ₃ for CO oxidation prepared by hydrolysis method	Hisahiro EINAGA, Takuya KAWAMOTO, Ryo ICHITSUBO, Hajime HOJO	Kyushu University
OE312	17:30	Control of catalytic activity of Ag/CeO ₂ catalysts tailoring Ag-CeO ₂ interfacial interaction	Maria V. GRABCHENKO, Gregory V. MAMONTOV, Vladimir I. ZAIKOVSKII, Valeria LA PAROLA, Leonarda F. LIOTTA, Olga V. VODYANKINA	Tomsk State University, Boreskov Institute of Catalysis SB RAS, Istituto per lo Studio dei Materiali Nanostrutturati (ISMN)-CNR

August 9, Thursday

11:30-12:30 Chair: S. Hosokawa (Kyoto Univ.) and M. Haneda (Nagoya Inst. Tech.)

OE401	11:30	The effect of ceria on palladium based passive NO _x adsorbers	Lidija V. TRANDAFILOVIC, Oana MIHAI, Louise OLSSON	Chalmers University of Technology
OE402	11:50	Investigating the effect of reduction conditions on diesel oxidation reaction over Pt-based NSR catalyst	Sarayute CHANSAI, Robbie BURCH, Chris HARDACRE	The University of Manchester, The Queen's University of Belfast
OE403	12:10	Microwave catalytic effects in highly effective direct decomposition of NO and H ₂ S by microwave catalysis	Wentao XU, Jicheng ZHOU	Xiangtan University
12:30-13:30 Chair: S. Chansai (Univ. Manchester) and H. Miura (Tokyo Metropolitan Univ.)				
OE404	12:30	(EtOH+NH ₃) synergism in lean-NO _x reduction over Ag/Al ₂ O ₃ catalyst	Fabien CAN, Mathias BARREAU, Xavier COURTOIS	Institut de Chimie des Milieux et Materiaux de Poitiers (IC2MP)
OE405	12:50	Effect of Chemical Composition of Real PM on Combustion Temperature	Saori HOSHI, Daiki YAMASHITA, Junya OHYAMA, Atsushi SATSUMA	Nagoya University
IE406	13:10	Characterization of rare earth-doped CeO ₂ -ZrO ₂ as oxygen storage materials by IR and isotopic transient kinetic analyses	Masaaki HANEDA, Yuichiro NAKAMURA, Shogo YAMADA, Katsuya IWASHINA, Ryoichi OSHIMA, Takahiro SATO, Masaaki INAMURA, Takashi WAKABAYASHI, Yuunosuke NAKAHARA	Nagoya Institute of Technology, Mitsui Mining and Smelting Co., Ltd.

August 10, Friday

9:00-10:00 Chair: R. Gounder (Purdue Univ.) and Z. Maeno (Hokkaido Univ.)

OE501	9:00	Theoretical studies on the "electron reservoir" effects of supported vanadia/ceria catalysts	Xin-Ping WU, Zhi-Qiang WANG, Chang HUANG, Xue-Qing GONG	East China University of Science and Technology
OE502	9:20	Solvent Molecules Act as Co-Catalysts and Co-Reactants during the Direct Synthesis of H ₂ O ₂ in Aqueous Solutions	Neil WILSON, Pranjali PRIYADARSHINI, Jason ADAMS, David FLAHERTY	University of Illinois
OE503	9:40	Manganese promoter effects in copper-based ester hydrogenation catalysis	Rolf BEERTHUIS, Nienke L. VISSER, Jon M. S. DEELEY, Glenn J. SUNLEY, Krijn P. DE JONG, Petra E. DE JONGH	Utrecht University, BP Chemicals
10:00-11:00 Chair: D. Flaherty (Univ. Illinois) and T. Takayama (Tokyo Inst. Tech.)				
OE504	10:00	Transformation of the structural units of zeolites used in the synthesis of SSZ-13	Kinga MLEKODAJ, Veronika PASHKOVA, Petr KLEIN, Maria LEMISHKA, Milan BERNAUER, Jiri DEDECEK	J. Heyrovsky Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, University of Pardubice

OE505	10:20	FT-IR Study of Characterization of Basicity of Lattice oxygen on Proton-form Zeolites using CO ₂ Probe Method	<u>Ryota OSUGA</u> , Toshiyuki YOKOI, Junko N. KONDO	Tokyo Institute of Technology, JST-PRESTO
OE506	10:40	Dynamic multinuclear sites formed by mobilized copper ions during the selective catalytic reduction of nitrogen oxides with ammonia	<u>Rajamani GOUNDER</u> , William F SCHNEIDER, Fabio H RIBEIRO, W Nicholas DELGASS, Jeffrey T MILLER, Aleksey YEZERETS, Christopher PAOLUCCI, Sichi LI, Hui LI, Ishant KHURANA, Atish A PAREKH, Arthur J SHIH, Jonatan D ALBARRACIN-CABALLERO, John R DI IORIO	Purdue University, University of Notre Dame, Cummins Inc.

11:00-11:30 Coffee break

11:30-12:50 Chair: X.-Q. Gong (East China Univ. Sci. Tech.) and J. N. Kondo (Tokyo Inst. Tech.)

OE507	11:30	Aerobic Oxidative Cross-Coupling Reaction of Catechols and Active Methylene Compounds Using Supported Metal Catalysts	<u>Zen MAENO</u> , Masanobu YAMAMOTO, Takato MITSUDOME, Tomoo MIZUGAKI, Koichiro JITSUKAWA	Osaka University
OE508	11:50	Unprecedented Catalytic Aurone Synthesis from Simple Chalcones Enabled by Design of a Pd-on-Au Bimetallic Nanoparticle Catalyst Supported on CeO ₂	<u>Takafumi YATABE</u> , Xiongjie JIN, Kazuya YAMAGUCHI, Noritaka MIZUNO	The University of Tokyo
OE509	12:10	The low temperature oxidative upgrading of short chain alkanes over Cu/ZSM-5 catalysts: the role of Cu speciation	<u>Robert D ARMSTRONG</u> , Virginie PENEAU, Nadine RITTERSKAMP, Christopher J KIELY, Stuart H TAYLOR, Graham J HUTCHINGS	Cardiff University, Lehigh University
OE510	12:30	Bimetallic Gd-Ce Doped Vanadium Phosphate Catalysts for Partial Oxidation of <i>n</i> -Butane to Maleic Anhydride	<u>Loong Kong LEONG</u> , Chung Shung WONG, Sumathi SETHUPATHI, Hui San THIAM, Yeow Hong YAP	Universiti Tunku Abdul Rahman

Room F

August 6, Monday

11:30-12:50 Chair: H. Liu (Peking Univ.) and H. Kobayashi (Hokkaido Univ.)

OF101	11:30	A structured nickel-based catalyst with high performance and tolerance to coke deposition in naphthalene steam reforming for biomass-gasification process	<u>Choji FUKUHARA</u> , Ryo WATANABE, Kota MATSUZAWA, Mio YOKOE, Kenji ASAOKA, Hidekiyo SUYAMA, Shuichiro SUZUKI	Shizuoka University, Shizuoka Seiki Co., Ltd.
IF102	11:50	Mechanistic study of the aqueous phase reforming of ethanol over Ru/TiO ₂ catalysts by in situ ATR-IR spectroscopy under working conditions	<u>Nobutaka MAEDA</u> , Ammara WAHEED, <u>Shuichi NAITO</u> , Alfons BAIKER	Dalian Institute of Chemical Physics, Kanagawa University, ETH Zurich
OF103	12:10	Depolymerization of hemicelluloses with solid acid catalysts: experimental and kinetic studies	<u>Lea VILCOCQ</u> , Edouard REBMANN, You Wayne CHEAH, Pascal FONGARLAND	UCBL-Universite de Lyon
IF104	12:30	Template-Free Synthesis and Catalytic Application of Hierarchical Zeolites from Natural Aluminosilicate Mineral: A Multi-Scale Approach	<u>Xiaojun BAO</u> , Yuanyuan YUE	Fuzhou University

12:50-14:30 Lunch

14:30-15:10 Chair: P. Dhepe (National Chem. Lab.) and S. Ishihara (Kanagawa Univ.)

OF105	14:30	Catalysis of weakly acidic carbons for hydrolysis of cellulose	<u>Hirokazu KOBAYASHI</u> , Atsushi FUKUOKA	Hokkaido University
OF106	14:50	Understanding the Surface Modification of Heterogeneous Catalyst for Hydrolytic Depolymerization of Cellulose	<u>Hao-Ju CHOU</u> , Jia-Hui WANG, Guo-Chuan YANG, <u>Po-Wen CHUNG</u>	Academia Sinica

15:10-16:30 Chair: P.-W. Chung (Academia sinica) and M. Shirai (Iwate Univ.)

KF107	15:10	Selective hydrogenolysis of cellulose and its derivatives to chemicals: catalytic functions and reaction pathways	<u>Haichao LIU</u>	Peking University
OF113	15:50	Hydrodeoxygenation of guaiacol over ion-exchanged ruthenium ZSM-5 and BEA zeolites	<u>Penghui YAN</u> , Eric KENNEDY, Michael STOCKENHUBER	The University of Newcastle
OF114	16:10	Direct oxidation of methane to value-added products using N ₂ O over Fe-ZSM-5, Fe-Beta and Fe-FER catalysts	<u>Guangyu ZHAO</u> , Eric KENNEDY, Michael STOCKENHUBER	The University of Newcastle

16:30-16:50 Coffee break

16:50-18:10 Chair: X. Bao (Fuzhou Univ.) and Y. Kita (Tokyo Inst. Tech.)

OF109	16:50	Catalytic conversion of biomass to valuable chemicals using supported metal catalysts in high-temperature water	Aritomo YAMAGUCHI, Naoki MIMURA, Masayuki SHIRAI, Osamu SATO	National Institute of Advanced Industrial Science and Technology (AIST), Iwate University
OF110	17:10	Selective conversion of concentrated sugars to 1,2-propylene glycol and ethylene glycol by using RuSn/AC catalysts	Jifeng PANG, Mingyuan ZHENG, Xincheng LI, Yu JIANG, Yu ZHAO, Aiqin WANG, Junhu WANG, Xiaodong WANG, Tao ZHANG	Dalian Institute of Chemical Physics
OF111	17:30	Understanding the depolymerization of lignin into value-added chemicals	Paresh DHEPE, Richa CHAUDHARY, Sandip SINGH	National Chemical Laboratory
OF112	17:50	Embedded structure catalyst: a new perspective from noble metal supported on molybdenum carbide	Yufei MA, Meng CHEN, Yanlin QIN, Yanqiang ZHOU, Changqing LIU, Li LIN, Qiliang SONG, Kuiyuan CHEN, Guoqing GUAN	Guangdong University of Technology, Hirosaki University

August 7, Tuesday

11:30-12:50 Chair: N. Yan (National Univ. Singapore) and K. Nakajima (Hokkaido Univ.)

OF201	11:30	Cracking reactivity of hierarchical catalysts with simultaneous generation of microporous zeolite and mesoporous silica by gel skeletal reinforcement	Atsushi ISHIHARA, Kouki MORI, Tadanori HASHIMOTO, Hiroyuki NASU	Mie University
IF202	11:50	On the selective transformation of oxygenated compounds present in aqueous fractions derived from biomass over tungsten oxides bronzes	Jose M. LOPEZ NIETO, Daniel DELGADO, Nathalia LA SALVIA, Ester GARCIA-GONZALEZ, Alberto FERNANDEZ-ARROYO, Marcelo DOMINE	Universidad Politecnica de Valencia, Universidad Complutense de Madrid
IF203	12:10	Catalytic Conversion of Biomass Platform Molecules to Useful Products	Edman TSANG	University of Oxford
OF204	12:30	Adsorption and Depolymerization of Cellulose-Derived Long-Chain β -Glucans by Post-Synthetically Functionalized Zeolite-Templated Carbon Catalysts	Mizuho YABUSHITA, Kota TECHIKAWARA, Hirokazu KOBAYASHI, Atsushi FUKUOKA, Alexander KATZ	Hokkaido University, University of California Berkeley

12:50-14:30 Lunch

14:30-15:30 Chair: J. M. Lopez Nieto (Univ. Politecnica de Valencia) and A. Ishihara (Mie Univ.)

OF205	14:30	A new two-step green process for 2,5-furandicarboxylic acid production from furfural, oxygen and carbon dioxide	Sebastien PAUL, Robert WOJCIESZAK, Franck DUMEIGNIL, Francesco SANTARELLI, Bruno REGHIZZI, Alessandra ROSELLI, Fabrizio CAVANI, Graham R. DICK, Matthew W. KANAN	Centrale Lille, Universita di Bologna, Stanford University
OF206	14:50	Single Pot Transformation of Furfural to 2-Methyltetrahydrofuran Over Pd Supported Hydrocalcite Catalysts	Nandan S. DATE, Rajeev C. CHIKATE, Chandrashekar V. RODE	CSIR-National Chemical Laboratory, MES abasaheb Garware College of arts and science
IF207	15:10	New Strategy for Selective Production of Furan 2,5-dicarboxylic Acid from Concentrated HMF Solutions with CeO ₂ -supported Au Catalyst	Kiyotaka NAKAJIMA, Minjune KIM, Yaqiong SU, Atsushi FUKUOKA, Emiel J.M. HENSEN	Hokkaido University, Eindhoven University of Technology

15:30-16:30 Chair: E. Tsang (Univ. Oxford) and T. Mizugaki (Osaka Univ.)

OF208	15:30	Vapor-phase conversion of γ -valerolactone over copper-based catalysts	Satoshi SATO, Takeshi SAITO, Yasuhiro YAMADA	Chiba University
KF209	15:50	New Catalytic Pathways for Production of α , ω -diols from Biomass	Jiayue HE, Kefeng HUANG, Kevin J BARNETT, Siddarth KRISHNA, David M ALONSO, Zachary J BRENTZEL, Samuel P BURT, Theodore WALKER, William F BANHOLZER, Christos T MARAVELIAS, Ive HERMANS, James A DUMESIC, George W HUBER	University of Wisconsin-Madison

16:30-16:50 Coffee break

16:50-18:10 Chair: G. W. Huber (Univ. Wisconsin-Madison) and Y. Nakagawa (Tohoku Univ.)

IF210	16:50	Development of Ru/CeO ₂ catalyst for selective C-C bond scission of biomass-derived oxygenates	Tomoo MIZUGAKI, Kohei UESUGI, Kodai NITTA, Zen MAENO, Takato MITSUDOME, Koichiro JITSUKAWA, Kiyotomi KANEDA	Osaka University
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OF211	17:10	Ethanol-to-Butadiene: A Highly Active ZnTa/SiO ₂ Mesoporous Catalyst	<u>Guillaume POMALAZA</u> , Mickael CAPRON, Franck DUMEIGNIL	University of Lille 1, Centre National de La Recherche Scientifique (CNRS), Ecole Centrale Lille, Unite de Catalyse et Chimie du Solide, Ecole nationale superieure de chimie de Lille
OF212	17:30	Reductive Amination of Carbonyl Compounds Catalyzed by Ruthenium Nanoparticles on Nb ₂ O ₅	<u>Yusuke KITA</u> , Tasuku KOMANOYA, Takashi KINEMURA, Keigo KAMATA, Michikazu HARA	Tokyo Institute of Technology, Japan Science and Technology Agency
OF213	17:50	Catalytic transformation of biomass-derived α -hydroxyl acids into amino acids	Weiping DENG, Yunzhu WANG, <u>Ning YAN</u>	National University of Singapore

August 8, Wednesday

11:30-12:50 Chair: *K. Wilson (RMIT Univ.) and T. Toyao (Hokkaido Univ.)*

OF301	11:30	Hydroconversion of fatty acid derivatives over Ni-Mo catalysts prepared with zeolite support	<u>Hiroyuki IMAI</u> , Miku ABE, Kazusa TERASAKA, Xiaohong LI	The University of Kitakyushu
OF302	11:50	Liquid phase oxidation of glycerol in flow-type reactor with molecular oxygen over highly dispersed nano-sized gold catalysts supported on Al ₂ O ₃	<u>Naoki MIMURA</u> , Natsumi MURAMATSU, Norihito HIYOSHI, Osamu SATO, Aritomo YAMAGUCHI, Yoshio MASUDA	National Institute of Advanced Industrial Science and Technology (AIST)
IF303	12:10	A bifunctional cerium phosphate solid catalyst for chemoselective acetalization of carbonyl compound	<u>Keigo KAMATA</u> , Shunsuke KANAI, Ippei NAGAHARA, Yusuke KITA, Michikazu HARA	Tokyo Institute of Technology, JST-PRESTO, JST-ALCA
OF304	12:30	Tunable Hierarchical Support for Enhancing the Activity and Stability of Metal Catalysts	Anup TATHOD, Naseem HAYEK, David SIMAKOV, <u>Oz M. GAZIT</u>	Israel Institute of Technology- Technion, University of Waterloo

12:50-14:30 Lunch

14:30-15:50 Chair: *K. Cheng (Xiamen Univ.) and N. Mimura (AIST)*

OF305	14:30	Catching the surface intermediates and elucidating the redox contribution of CeO ₂ during dimethyl carbonate synthesis from CO ₂ and methanol	Dragos STOIAN, <u>Atul BANSODE</u> , Francesc MEDINA, Wouter VAN BEEK, Atsushi URAKAWA	Institute of Chemical Research of Catalonia (ICIQ), University Rovira i Virgili, European Synchrotron Radiation Facility
OF306	14:50	Cycloaddition of Carbon Dioxide and Epoxides using TRIS and Halides as Dual Catalyst System	Laila Sari AMBAR, <u>Takehiko SASAKI</u>	The University of Tokyo
KF307	15:10	Designing Porous Catalysts for Biomass Transformations	<u>Karen WILSON</u> , Adam F LEE	RMIT University

15:50-16:30 Chair: *O. M. Gazit (Israel Inst. Tech.) and H. Imai (Univ. Kitakyushu)*

OF308	15:50	A highly selective and stable ZnO-ZrO ₂ solid solution catalyst for CO ₂ hydrogenation to methanol	<u>Wang JIJIE</u> , Li ZELONG, Tang CHIZHOU, Han ZHE, Liu HAILONG, Feng ZHAOCHI, Li CAN	Dalian Institute of Chemical Physics
OF309	16:10	TiO ₂ -supported Re as a heterogeneous catalyst for selective hydrogenation of carboxylic acids and their derivatives	<u>Takashi TOYAO</u> , S. M. A. H. SIDDIKI, Ken-ichi SHIMIZU	Hokkaido University, Kyoto University

16:30-16:50 Coffee break

16:50-18:10 Chair: *A. Bansode (ICIQ) and T. Sasaki (Univ. Tokyo)*; 17:10-17:30: Break

OF310	16:50	Design of bifunctional catalysts for the direct conversion of carbon dioxide into lower olefins and aromatic	<u>Kang CHENG</u> , Xiaoliang LIU, Cheng ZHOU, Qinghong ZHANG, Jincan KANG, Ye WANG	Xiamen University
KF312	17:30	Sustainable Catalysts for the fixation of Carbon Dioxide and Carbon Monoxide as C-1 sources to synthesize the Value Added Chemicals	<u>Bhalchandra BHANAGE</u> , Vitthal SAPTAL	Institute of Chemical Technology

August 9, Thursday

11:30-12:50 Chair: *K. Tomishige (Tohoku Univ.) and T. Yabe (Waseda Univ.)*

OF401	11:30	Facile preparation of Ni/Al ₂ O ₃ catalytic formulations with the aid of cyclodextrin complexes for the direct amination of aliphatic alcohols with NH ₃	<u>Marc PERA-TITUS</u> , Ajay TOMER, Frederic WYRWALSKI, Cedric PRZYBYLSKI, Jean-Francois PAUL, Eric MONFLIER, Anne PONCHEL	Univ. Artois, Eco-Efficient Products and Process Laboratory (E2P2L), Sorbonne Universités
OF402	11:50	Development of Vanadium-decorated Platinum Nanoparticle Catalyst for Green Sustainable Hydrogenation of Amides to Amines	<u>Takato MITSUDOME</u> , Kazuhiro TAKAHASHI, Zen MAENO, Tomoo MIZUGAKI, Koichiro JITSUKAWA	Osaka University

KF403	12:10	Hydrogen borrowing methodology for catalytic synthesis of amines and alcohols	<u>Irina L. SIMAKOVA</u>	Boreskov Institute of Catalysis
12:50-13:30 Chair: <i>I. L. Simakova (Boreskov Inst. Catal.) and K. Wada (Kagawa Univ.)</i>				
OF404	12:50	First evidence for singlet molecular oxygen, $^1\text{O}_2$ ($^1\Delta_g$), generation from polyoxometalate and hydrogen peroxide	<u>Benjamin PACAUD</u> , Jean-Marie AUBRY, Veronique NARDELLO-RATAJ	University of Lille 1
OF405	13:10	Preparation of highly dispersed nickel metal catalysts supported on silica by heat treatment with water	<u>Masaki OKAMOTO</u> , Keisuke TSURUTA	Tokyo Institute of Technology

August 10, Friday

9:00-10:20 Chair: *H. Kobayashi (Hokkaido Univ.) and S. Inagaki (Yokohama National Univ.)*

OF501	9:00	[2+2+2] cycloaddition of alkynes over supported Pd-Au alloy catalysts	<u>Hiroki MIURA</u> , Yumi TANAKA, Karin NAKAHARA, Keisuke ENDO, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
OF502	9:20	Boron doped $\gamma\text{-C}_3\text{N}_4$ as an effective metal-free solid base catalyst in Knoevenagel condensation	<u>Yonghua ZHOU</u> , Jianren WEI, Jun ZHAO	Central South University
KF503	9:40	Role of heterogeneous catalysis in the biorefinery of wood into chemicals	<u>Bert SELS</u>	KU Leuven

10:20-11:00 Chair: *Y. Zhou (Central South Univ.) and S. Suganuma (Tottori Univ.)*

OF504	10:20	Striking Effect of Titania Supports on Ir-Catalyzed Synthesis of Benzimidazoles via Dehydrogenation or Hydrogen Transfer	<u>Kenji WADA</u> , Tatsuhiro FUKUTAKE, Qi FENG	Kagawa University
OF505	10:40	Direct Synthesis of Arylcarbamates from Amines, Alcohols and CO_2 over CeO_2 with 2-Cyanopyridine	<u>Masazumi TAMURA</u> , Ayaka MIURA, Yu GU, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University, JST Presto

11:00-11:30 Coffee break

11:30-12:50 Chair: *B. Sels (KU Leuven) and M. Tamura (Tohoku Univ.)*

OF506	11:30	Structure and reaction mechanism of noble-metal-modified $\text{ReO}_x/\text{CeO}_2$ catalysts for deoxydehydration	<u>Yoshinao NAKAGAWA</u> , Shuhei TAZAWA, Tianmiao WANG, Masazumi TAMURA, Keiichi TOMISHIGE	Tohoku University
OF507	11:50	Structure and hydrogenation catalysis of platinum nanosheets between graphite layers	Hiroaki AMANUMA, Shusuke KATO, Yusuke YAMAZAKI, Hidetaka NANA O, <u>Masayuki SHIRAI</u>	Iwate University
OF508	12:10	Application of N-doped carbon-encapsulated metal nanoparticles as heterogeneous catalysts in organic reactions	Soeren KRAMER, Jerrick MIELBY, <u>Soeren KEGNAES</u>	Technical University of Denmark
OF509	12:30	Structured catalysts of biofuels steam/autothermal reforming on functionally graded substrates based on carbon foam: design and performance	<u>Vladislav A. SADYKOV</u> , Svetlana N. PAVLOVA, Yulia N. BESPALKO, Marina V. ARAPOVA, Oleg L. SMORYGO, Vitali A. MIKUTSKI	Boreskov Institute of catalysis, Novosibirsk State University, Powder Metallurgy Institute

Poster Session

August 6, Monday

P1001	Steam Gasification Runs and Quantum Chemical Calculations of Low-Rank Coals with Exchanged Sodium Cations	<u>Yuji SHINOHARA</u> , Naoto TSUBOUCHI	Hokkaido University
P1002	Differences in Thermal Decomposition Behavior of Platinum Salt on Silica and Alumina Characterized by X-ray Absorption Spectroscopy	<u>Takashi YAMAMOTO</u> , Kazunori MIYAMOTO	Tokushima University
P1003	Surface Layer Composition of Titania under Ambient Air	<u>Valery S. ZAKHARENKO</u> , Elena B. DAIBOVA	Boreskov Institute of Catalysis, Siberian Research Institute of Agriculture and Peat
P1004	Evaluation of surface protonics on Ce _{0.25} Zr _{0.75} O ₂ by AC impedance measurement	<u>Yudai HISAI</u> , Yukiko KAMITE, Ryo MANABE, Tomohiro YABE, Shuhei OGO, Einar VOLLESTAD, Truls NORBY, Yasushi SEKINE	Waseda University, Oslo University
P1005		<u>Xiaohua ZHANG</u> , Ping LU, Chen ZHANG, Xiangzhi CUI, Yingfeng XU, Haiyun QU, Jianlin SHI	Shanghai Institute of Ceramics
P1006	The active site, doping effect and reaction pathway of the dehydrogenation of hydrocarbons on the nanostructured carbon catalyst	<u>Bo LI</u>	Institute of Metal Research
P1007	Acid properties and alkali resistance of porous silica-zirconia with controlled local structure	<u>Genki TANAKA</u> , Ryoji TAKAHASHI, Fumiya SATO	Ehime University
P1009	Elucidation of Active Surface and the Roles of Surface Moieties of a Lithium Phosphate Catalyst for the Isomerization of 2,3-epoxybutane to 3-buten-2-ol	<u>Tae Yong KIM</u> , <u>Chyan Kyung SONG</u> , Yang Sik YUN, Danim YUN, Hongseok PARK, Younhwa KIM, Kyung Rok LEE, Jeong Woo HAN, Jongheop YI	Seoul National University, University of Seoul
P1010	Investigation of active species on lanthanum catalysts in the ketonization of carboxylic acid	<u>Fumiya SATO</u> , Ryoji TAKAHASHI	Ehime University
P1011	In situ X-ray absorption spectroscopy and its application in nanocatalysts	<u>Jing ZHANG</u> , Long ZHANG, shengqi CHU, lirong ZHENG	Institute of high energy physics
P1012	Rate-determining Step Examination of Ammonia Synthesis over Electride-supported Ru Catalysts by Kinetics Analysis	<u>Yasukazu KOBAYASHI</u> , Masaaki KITANO, Shigeki KAWAMURA, Toshiharu YOKOYAMA, Hideo HOSONO	Tokyo Institute of Technology
P1013	Characterization of Ni/FAU catalysts and catalytic activity for dry reforming reaction of methane	<u>Yusaku YAMAMOTO</u> , Daisuke HASHIMOTO, Naoto KUBOCHI, Shohei YAMASHITA, Misaki KATAYAMA, Yasuhiro INADA	Ritsumeikan University
P1014	Influence of CeO ₂ addition sequence on the physicochemical properties of Fe ₂ O ₃ / γ -Al ₂ O ₃ catalysts	<u>Jingfang SUN</u> , Yiyang LU, Yaxin YU, Changjin TANG, Lin DONG	Nanjing University
P1015	Pore structure of TiO ₂ -modified ZrO ₂ particles prepared by the glycothermal method	<u>Fuya SUGIYAMA</u> , Shinji IWAMOTO	Gunma University
P1016	Characterization and catalytic activity of zirconia synthesized by using amines as precipitant	<u>Chansong KIM</u> , Eunpyo HONG, Sung Woo BAEK, Sun Gyu LEE, Chae-Ho SHIN	Chungbuk National University
P1017	In situ Observation of Local High Temperature at Contact Point of SiC Particles under Microwave Heating using Luminescing Molecular Thermometer	<u>Taishi ANO</u> , Masanori YAMAMOTO, Yuichi KITAGAWA, Jun FUKUSHIMA, Shuntaro TSUBAKI, Yasuchika HASEGAWA, Hirotsugu TAKIZAWA, Yuji WADA	Tokyo Institute of Technology, Hokkaido University, Tohoku University
P1018	Unravelling structural properties of NaTaO ₃ -LaCrO ₃ solid solution photocatalysts	<u>Hanggara SUDRAJAT</u> , Yizhong ZHOU, Takuro SASAKI, Nobuyuki ICHIKUNI, Hiroshi ONISHI	Kobe University, Chiba University
P1019	Study of acidic properties of heteropolyacid catalysts supported on various substrates	<u>Kiria KOJIMA</u> , Ryota OSUGA, Toshiyuki YOKOI, Junko N. KONDO	Tokyo institute of technology, JST-PRESTO
P1020	Establishing and Understanding Adsorption-Energy Scaling Relations with Negative Slopes	<u>Hai-Yan SU</u> , Wei-Xue LI	Dalian Institute of Chemical Physics
P1021	A Combined Spectroscopic Characterization of P-modified ZSM-5 catalyst	<u>Hacksung KIM</u> , Na Young KANG, Fulya DOGAN, Byeongdu LEE, Peter C. STAIR, Yong-Ki PARK	Northwestern University, Argonne National Laboratory, Korea Research Institute of Chemical Technology
P1022	Strong effect of the surface properties of carbon supports in Au-catalyzed reactions	<u>Baira DONOEVA</u> , Nazila MASOUD, Petra DE JONGH	Utrecht University
P1023	First-Principles Investigation of Catalytic Activity Improvements with an Electric Field	<u>Katsuhiro WAKAMATSU</u> , Teppei OGURA	Kwansei Gakuin University
P1024	Significance of surface oxygen-containing groups and heteroatom P species in switching the selectivity of Pt/C catalyst in hydrogenation of 3-nitrostyrene	<u>Qifan WU</u> , Bin ZHANG, Chao ZHANG, Fengyu ZHAO	Changchun Institute of Applied Chemistry, University of Science and Technology of China
P1025	Emergence of hydrogenation catalysis in PVP-stabilized gold superatoms by doping a single heterometal atom	<u>Shingo HASEGAWA</u> , Shun HAYASHI, Shinjiro TAKANO, Seiji YAMAZOE, Tatsuya TSUKUDA	The University of Tokyo, Tokyo Metropolitan University, Kyoto University, CREST

P1026	Adsorption Behavior of CO Over Cu-Pd Bimetallic Nanoparticles Supported on SiO ₂ Investigated by Infrared Spectroscopy	Makiko ABE, Michinori SUMIMOTO, Junko N. KONDO, Masaaki YOSHIDA, Yoshihisa SAKATA	Yamaguchi University, Tokyo Institute of Technology
P1027	<i>In situ</i> DRIFTS for the mechanistic study of 1,4-butanediol dehydration over <i>m</i> -ZrO ₂ catalyst	Rongli MI, Bolun YANG	Xi'an Jiaotong University
P1028	The tunable catalytic performance of supported single Pt atom on the graphene in propane direct dehydrogenation by rational doping	XiaoYing SUN, Zhen ZHAO	Shenyang Normal University, China University of Petroleum
P1029	The effect of the decreased defect concentration in ceria by the thermal treatment prior to the Pt loading on the Pt-ceria interaction and the CO oxidation ability of Pt/CeO ₂ catalyst	Jaeha LEE, YoungSeok RYOU, Jonghyun KIM, Sungha HWANG, Xiaojun CHAN, Tae Jin KIM, Do Heui KIM	Seoul National University, Stony Brook University
P1030	Mass transport behavior in hierarchical porous materials revealed by frequency response method	Lijuan SONG, Yucai QIN	Liaoning Shihua University
P1031	Preparing SnO ₂ nano-rod supports for Pd for toluene combustion: insight into the Pd valence state distribution and its effect on the activity	Xiang WANG, Yaqian LIU, Yao GUO, Cheng RAO, Honggen PENG	Nanchang University
P1032	First-Principles Study of the Diffusion and Reaction of Oxygenated Species on YSZ Surface	Yuichi TAGAWA, Teppei OGURA	Kwansei Gakuin University
P1033	Multiple acidic sites in H-ZSM5 as revealed by solid state NMR spectroscopy-Insight from Framework Aluminum	Qiang WANG, Shaohui XIN, Jun XU, Yueying CHU, Guodong QI, Ningdong FENG, Feng DENG	Wuhan Institute of Physics and Mathematics
P1034	Selective Decomposition of Formic Acid on Pd-Au Bimetallic Surfaces	Wen-Yueh YU, Gregory M. MULLEN, David W. FLAHERTY, C. Buddie MULLINS	National Taiwan University, University of Texas at Austin, University of Illinois at Urbana-Champaign
P1035	Cascade Dehydrative Amination of Glycerol to Oxazoline	Rajan PANDYA, C. V. RODE	CSIR NCL
P1036	Nanoscale Chemical Imaging of Zeolites Using Atom Probe Tomography	Joel E. SCHMIDT, Jonathan D. POPLAWSKY, Bert M. WECKHUYSEN	Utrecht University, Oak Ridge National Laboratory, Oak Ridge
P1037	Adsorption and dissociation reaction of propene on bare and yttrium doped gold clusters	Julia BARABAS, Jan VANBUEL, Piero FERRARI, Ewald JANSSENS, Tibor HOLTZL	Budapest University of Technology and Economics, KU Leuven, Furukawa Electric Institute of Technology Ltd.
P1038	Vibration-driven reaction of CO ₂ on Cu surface via Eley-Rideal type mechanism	Takumi IMABAYASHI, Jiamei QUAN, Taijun KOZARASHI, Tomoyasu MOGI, Takahiro KONDO, Kotaro TAKEYASU, Junji NAKAMURA	University of Tsukuba, Tsukuba Research Center for Energy Materials Science (TREMS)
P1040	A comprehensive investigation of condensation of furanic platform molecules to diesel range precursors over sulfonic acid functionalized fibrous nano-silica (KCC-1)	Mahlet N GEBRESILLASE, Raghavendra SHAVI, Jeong Gil SEO	Myongji University
P1041	Catalytic deoxydehydration of glycerol to allyl alcohol - a promising pathway to a high-versatile platform molecule	Benjamin KATRYNIOK, Marcia ARAQUE, Yoshihiro KON, Takuya NAKASHIMA, Karen SILVA, Sebastien PAUL, Franck DUMEIGNIL	Univ. Lille, National Institute of Advanced Industrial Science and Technology (AIST)
P1042	Nb-Beta zeolite catalysts for the efficient transformation of glucose to multiple platform molecules	Simona M. COMAN, Magdi EL FERGANI, Natalia CANDU, Vasile I. PARVULESCU	University of Bucharest
P1043	An electrode of self-assembly Co-Al layered double hydroxides for water oxidation	Chun TSAO, Yi-Yun LEE, Chin-Jung LIN	National Ilan University
P1044	Development of active catalyst for direct conversion of biomass cellulose to C3 and C4 hydrocarbons at low temperature	Yutaro OKUNO, Hikaru SEKINE, Shuhei OGO, Tomohiro YABE, Ayumu ONDA, Yasushi SEKINE	Waseda University, Kochi University
P1045	Ammonia synthesis using Co supported catalysts in an electric field	Ryuya SAKAI, Ami GONDO, Ryo MANABE, Tomohiro YABE, Shuhei OGO, Yasushi SEKINE	Waseda University
P1047	Regioselective hydrogenolysis of alga-derived squalane over Ru-VO _x /SiO ₂ catalyst	Yosuke NAKAJI, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1048	Efficient production of 1,3-butadiene in the dehydration of 1,4-butanediol over rare earth oxides	Yuchao WANG, Daolai SUN, Yasuhiro YAMADA, Satoshi SATO	Chiba University
P1049	Electrochemical properties of mesoporous manganese oxide sphere obtained by aerosol-assisted self-assemble process	Chun-Jou LIN, Te-Wang CHEN, Ya-Hsuan LIOU, Chin-Jung LIN	National Ilan University, National Taiwan University
P1050	The control of acidic property on AEI-type zeolite and its catalytic activity to MTO reaction	Yusuke KUNITAKE, Junko N. KONDO, Toshiyuki YOKOI	Tokyo Institute of Technology, JST PRESTO
P1051	Earth-Abundant Mixed-Metal Oxide@Carbon Nitride Photocatalysts for H ₂ O ₂ Generation Only From H ₂ O and O ₂	Jianyuan LIU, Xu XIANG	Beijing University of Chemical Technology
P1052	Thermal and catalytic pyrolysis of sisal residue	Camila R. de O. FELIX, Aroldo F. AZEVEDO JR., Victor T. DA SILVA, Roger T. F. FRETY, Soraia T. BRANDAO	Universidade Federal da Bahia, Instituto Federal da Bahia, Universidade Federal do Recôncavo, Universidade Federal do Rio de Janeiro

P1053	Interface-Promoted Dehydrogenation and Water-Gas Shift toward High-Efficient H ₂ Production from Aqueous Phase Reforming of Cellulose	Jian ZHANG, Zhe AN, Jing HE	Beijing University of Chemical Technology
P1054	Hydrogenolysis of 5-HMF into DMF via non-Noble bimetallic Cu-Fe catalyst	Bhanupratap S SOLANKI, Dr. Chandrashekar V RODE	CSIR-National Chemical Laboratory
P1055	Highly Ordered Mesoporous Fe ₂ O ₃ -ZrO ₂ Bimetal Oxides for an Enhanced CO Hydrogenation Activity to Hydrocarbons	Jae Min CHO, Jong Wook BAE	Sungkyunkwan University
P1056	Copper nanoparticles on amorphous zirconia for methanol synthesis via carbon dioxide hydrogenation	Shohei TADA, Ayaka KATAGIRI, Keiko KIYOTA, Tetsuo HONMA, Hiromu KAMEI	Seikei University, Japan Synchrotron Radiation Research Institute, Nikki-Universal Co., Ltd., The University of Tokyo
P1057	One-pot Production of 1,4-Butanediol from 1,4-Anhydroerythritol Using the Deoxydehydration Reaction	Tianmiao WANG, Sibao LIU, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1058	Hydrogenation of the full scope of natural amino acids and a protein hydrolysate into amino alcohols	Annelies VANDEKERKHOVE, Free DE SCHOUWER, Laurens CLAES, Dirk E. DE VOS	Catholic University of Leuven
P1059	Demethoxylation of Guaiacol Derivatives over Platinum Catalysts without External Hydrogen	Akari MIYAGAWA, Yoshinao NAKAGAWA, Masazumi TAMURA, Keiichi TOMISHIGE	Tohoku University
P1060	Iron sulfide loaded carbon nanotube-graphene composite (FeS/CNT-GR) for Oxygen reduction reaction	GyuSik CHAE, Jae Sung LEE	Pohang University of Science and Technology
P1061	Highly Selective Conversion of Carbon Dioxide to Lower Olefins	Zelong LI, Jijie WANG, Yuanzhi QU, Hailong LIU, Can LI	Dalian Institute of Chemical Physics
P1062	The Investigation of the Efficient Catalytic Methylation or Formylation of Amines with CO ₂	Hailong LIU, Peng WANG, Zelong LI, Jijie WANG, Can LI	Dalian Institute of Chemical Physics
P1063	Carbon nanotubes supported Ni catalyst and the application to steam reforming bio-sourced glycerol	Shuzhuang LIU, Rong WANG, Shizhong LUO, Fangli JING, Wei CHU	Sichuan University
P1064	Hydrosilylation of Allenes over Palladium-Gold Alloy Catalyst	Suguru SASAKI, Hiroki MIURA, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
P1065	Tetrabutylphosphonium bromide: a versatile ionic liquid catalyst for the bio-based production of butadiene and acrylic acid.	Maxime STALPAERT, Francisco G. CIRUJANO, Dirk E. DE VOS	KU Leuven
P1066	Versatile and sustainable heterogenous N-methylation of various amines by methanol over a Pt/C catalyst	Mohammad A. R. JAMIL, SMA H. SIDDIKI, Takashi TOYAO, Ken-ichi SHIMIZU	Hokkaido University, Kyoto University
P1067	High performance of catalytic transfer hydrogenation of biomass-derived unsaturated carbonyl using La ₂ O ₃	Taufik Abdillah NATSIR, Takayoshi HARA, Nobuyuki ICHIKUNI, Shogo SHIMAZU	Chiba University, Universitas Gadjah Mada
P1068	The Direct Conversion of Phenol to Cyclohexylamines - a New and Sustainable Pathway to Aliphatic Polyurethanes?	Patrick TOMKINS, Carlot VALGAEREN, Koen ADRIAENSEN, Thomas CUYPERS, Dirk E. DE VOS	KU Leuven
P1069	Selectivity in phenol hydrogenation to cyclohexanone over Rh/SiO ₂ catalysts	Hongwei ZHANG, Stephan JAENICKE, Gaik-Khuan CHUAH	National University of Singapore
P1070	Theoretical study of correlations between structures and catalytic activities in polymer-stabilized Au nano cluster catalysts	Yoshinori ATO, Akihide HAYASHI, Takashi KAWAKAMI, Shusuke YAMANAKA, Mitsutaka OKUMURA	Osaka University
P1071	Synthesis of Zeolite Beta from Low-Cost Natural Aluminosilicate Minerals and Its Catalytic Application for Esterification	Yuanyuan YUE, Xiaoxue GUO, Tinghai WANG, Xiaojun BAO	Fuzhou University
P1072	Catalytic conversion of N-containing sugar alcohol from chitin	Kota TECHIKAWARA, Hirokazu KOBAYASHI, Atsushi FUKUOKA	Hokkaido University
P1073	Continuous production of biodiesel from microalgae by extraction coupling with transesterification under supercritical conditions	Jian Zhong YIN, Dan ZHOU, Bao Quan QIAO	Dalian University of Technology
P1074	Phosphoric acid pretreatment of cellulose for carbon catalyzed hydrolysis to glucose	Abhijit SHROTRI, Lina MAHARDIANI, Hirokazu KOBAYASHI, Atsushi FUKUOKA	Hokkaido University
P1075	Efficient dry (CO ₂) reforming of methane by current-assisted self-heating of metal/carbon catalysts	Danim YUN, Kyung Rok LEE, Yang Sik YUN, Tae Yong KIM, Hongseok PARK, Chyan Kyung SONG, Younhwa KIM, Jongheop YI	Seoul National University
P1076	A Facile Synthesis of Novel 1,3-dimethyl-2-(2-(1-alkyl-1H-indol-3-yl)vinyl)-1Hbenzo[d]imidazol-3-ium methosulphate Salts	Rama Devi BHOOMIREDDY, Mahesh Goud BAKKOLLA, Ashok Kumar TADURI, Mohana Rao ANGURU	Jawaharlal Nehru Technological University Hyderabad
P1077	Selective synthesis of N-methylaniline from CO ₂ , H ₂ and aniline over CeO ₂ -supported Cu sub-nanoparticle catalyst	Yu GU, Masazumi TAMURA, Ayaka MIURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University

P1078	Glucose isomerization to fructose over Ba-Zr mixed metal oxide catalyst	<u>Sharda E. KONDAWAR</u> , Chetana R. PATIL, Chandrashekhar V. RODE	CSIR-National Chemical Laboratory
P1079	One-pot synthesis of 2-pyrrolidone from pyroglutamic acid and glutamic acid using Ru/Al ₂ O ₃	<u>Satoshi SUGANUMA</u> , Hiroki ASAKO, Rika TAKAGI, Shota JOKA, Akihiro OTANI, Naonobu KATADA	Tottori University
P1080	New Generation Novel Hybrid Perovskite Catalysts For De-NO _x Applications	<u>Kerem E. ERCAN</u> , Zafer SAY, Merve KURT, Giuseppe PANTALEO, LEONARDA F. LIOTTA, Anna M. VENEZIA, Emrah OZENSOY	Bilkent University, CNR-Institute for the Study of Nanostructured Materials (ISMN)
P1081	Novel Bimetallic Cobalt Catalysts for the Direct Amination of Alcohols	<u>Javier IBANEZ ABAD</u> , Bright KUSEMA, Sebastien PAUL, Marc PERA-TITUS	Univ. Lille, Eco-Efficient Products and Process Laboratory (E2P2L)
P1082	Deoxydehydration of Glycerol to Allyl Alcohol over ReO _x -Au/CeO ₂ catalyst with H ₂	<u>Hiroki HAYASAKA</u> , Shuhei TAZAWA, Nobuhiko OTA, Yoshinao NAKAGAWA, Masazumi TAMURA, Keiichi TOMISHIGE	Tohoku University
P1083	Highly Efficient Epoxidation of Allylic Alcohols with Hydrogen Peroxide Catalyzed by Peroxometalate-Based Ionic Liquids	Wenbao MA, Haiyang YUAN, Qingqing ZHOU, Haifeng WANG, <u>Zhenhan HOU</u>	East China University of Science and Technology
P1084	An Integrated Synthesis of Jet-fuel Precursors from Carbohydrates <i>via</i> Dehydration Followed by Aldol Condensation	<u>Suhas H SHINDE</u> , Chandrashekhar V RODE	CSIR-National Chemical Laboratory
P1085	Selective hydrogenation of adipic acid to 1,6-hexanediol by atomically dispersed Ni on silica	<u>Cheng-Chieh TU</u> , Jia-Wei JIANG, Yu-Chuan LIN	National Cheng Kung University
P1086	Heterogeneous Cu/CeO ₂ catalyst for methanol synthesis by hydrogenation of dimethyl carbonate	<u>Eiji SAGAWA</u> , Masazumi TAMURA, Takahisa KITANAKA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1087	Re-Pd/SiO ₂ catalyst for hydrogenation of dicarboxylic acids to diols	<u>Kemmei SUZUKI</u> , Yasuyuki TAKEDA, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1088	Ionic liquid in SCILL: a key in selectivity and stability of catalyst	Iunia <u>PODOLEAN</u> , Octavian PAVEL, Haresh MANYAR, Kathryn RALPHS, Peter GOODRICH, Rebecca TAYLOR, Vasile PARVULESCU, Christopher HARDACRE	University of Bucharest, Queen's University Belfast, The University of Manchester
P1089	Development of honeycomb-type Ru-based catalyst for NH ₃ decomposition, with mass processing ability of raw materials	<u>Masaki KAWASE</u> , Kimihito SUZUKI, Ryo WATANABE, Choji FUKUHARA	Shizuoka University, Nippon Steel & Sumitomo Metal Co.
P1090	Ruthenium loaded on alumina catalytically active for one-pot synthesis of 2-pyrrolidone from pyroglutamic acid	<u>Akihiro OTANI</u> , Shota JOKA, Satoshi SUGANUMA, Etsushi TSUJI, Naonobu KATADA	Tottori University
P1092	Removal of nitric oxide by perovskite LaFeO ₃ -LaMnO ₃ composite nanoarray	Guan-Ting PAN, Chih-Wen HUANG, <u>Thomas C.-K. YANG</u> , Siewhui CHONG	National Taipei University of Technology, University of Nottingham Malaysia Campus
P1093	Bioethanol conversion into 1,3-Butadiene on single site TaSiBEA and MTaSiBEA (M=Ag, Cu, Zn) zeolite catalysts	<u>Stanislaw DZWIGAJ</u> , Christophe CALERS, Pavlo KYRIIENKO, Olga LARINA, Sergiy SOLOVIEV, Svitlana ORLYK	Sorbonne Universite, L.V.Pisarzhevsky Institute of Physical Chemistry of the NAS of Ukraine
P1094	Selective reduction of 2-furancarboxylic acid into 5-hydroxyvaleric acid derivatives over supported platinum catalyst	<u>Hiroshi TAKAGI</u> , Takehiro ASANO, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1095	Maximizing Biojet Fuel Production from Triglyceride: Effects of the Hydrocracking Catalyst and Deoxygenation/Hydrocracking Steps	Myoung Yeob KIM, <u>Songhyun LEE</u> , Minkee CHOI	Korea Advanced Institute of Science and Technology
P1096	Metal-free epoxidation of internal and terminal alkenes with tert-butyl hydroperoxide/isobutyraldehyde/oxygen system	<u>Mei HONG</u> , Jie MIN	Nanjing Forestry University
P1097	Synthesis of butanediols by selective hydrogenolysis of 1,4-anhydroerythritol	<u>Naoyuki SEKINE</u> , Takahiro ARAI, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1098	Application of Fe/SiO ₂ prepared from rice husk pyrolytic residue to treat banknote printing wastewater	<u>Jiahui XIONG</u> , Yaxin LI, Guiying LI, Changwei HU	Sichuan University
P1099	Hydrodeoxygenation of Ni-W bimetallic catalysts for the conversion of jatropha oil into high-quality fuel	<u>Rui YANG</u> , Dan LI, Changwei HU	Sichuan University
P1100	Selective conversion of 2,5-hexanedione to 3-methyl-2-cyclopentenone over solid acid catalyst	<u>Shun NISHIMURA</u> , Shintaro OHMATSU, Kohki EBITANI	Japan Advanced Institute of Science and Technology

P1101	Catalytic dehydration of glucose into 5-hydroxymethylfural on Fe/β zeolites with extra-framework isolated Fe species in a biphasic reaction system	<u>Hong HU</u> , Siquan XU, Haian XIA	Nanjing Forestry University
P1102	Direct evidence of the incorporation of Cu species into ZrO ₂ lattice over CuO/ZrO ₂ for CO ₂ -to-methanol hydrogenation	<u>Shingo KAYAMORI</u> , Shohei TADA, Kenichi KON, Takashi TOYAO, Shigeo SATOKAWA	Seikei University, Hokkaido University, Kyoto University
P1103	Effect of IB-metal on Ni Catalyst for Selective Hydrogenation of Acetylene	<u>Hua LIU</u> , Mengqian CHAI, Xiaoyan LIU, Aiqin WANG, Tao ZHANG	University of Chinese Academy of Sciences, Dalian Institute of Chemical Physics
P1104	Coke formation in low temperature Methanol-to-DME reaction: the effect of zeolites channel topology	Massimo MIGLIORI, Giuseppe BONURA, Luis GOMEZ-HORTIGUELA, Alfredo ALOISE, Enrico CATIZZONE, Francesco FRUSTERI, <u>Girolamo GIORDANO</u>	University of Calabria, Instituto de Catalisis y Petroleoquimica-CSIC
P1105	One pot conversion of glycerol to acrylic acid over dual catalyst beds	<u>Bo WANG</u> , Armando BORGNA	Institute of Chemical and Engineering Sciences A*STAR
P1106	Catalytic conversion of xylan into furfural over sulfonic acid-functionalized graphene oxide	Pravin UPARE, Dong-Won HWANG, <u>Do-Young HONG</u> , Ga-Young CHA, Jong-San CHANG, Young Kyu HWANG	Korea Research Institute of Chemical Technology (KRICT), University of Science and Technology (UST)
P1107	Polymer-stabilized mono- and bimetallic catalysts for hydrogenation under mild conditions	<u>Assemgul AUYEZKHANOVA</u> , Alima ZHARMAGAMBETOVA, Kuralay SEITKALIYEVA, Akmaral DARMENBAYEVA	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry
P1108	Production of value-added platform chemicals via catalytic conversion of macroalgae-derived alginic acid	<u>Chunghyeon BAN</u> , Seungdo YANG, Wonjin JEON, Hee Chul WOO, Do Heui KIM	Seoul National University, Korea Institute of Energy Research, Pukyong National University
P1110	Polysaccharide-inorganic transition metal composites for partial oxidation of cyclohexane	<u>Eldar TALGATOV</u> , Alima ZHARMAGAMBETOVA, Assemgul AUYEZKHANOVA, Sandugash AKHMETOVA	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry
P1111	Selective hydrogenation of 1,3-butadiene on Pd-Cu bimetallic catalysts	<u>Qiuchen YANG</u> , Ruijun HOU, Jinsheng FENG, Kenning SUN	Beijing Institution of Technology
P1112	Hydrogenation of 4-propylphenol over carbon supported metal catalyst in aqueous ethanol solution	Shuichiro HONGO, Naohiro MINAKAWA, Yoshiyuki NAGASAWA, Hidetaka NANAŌ, Osamu SATO, Aritomo YAMAGUCHI, Masayuki SHIRAI	Iwate University, AIST
P1113	Production of Higher Olefins via Selective Hydrodeoxygenation of Methyl Palmitate over Bifunctional Re-Based Catalysts	<u>Ningning WANG</u> , Jianglong PU, Kihoon KIM, Eika W. QIAN	Tokyo University of Agriculture and Technology
P1114	Direct Conversion of CO ₂ into Methanol over Promoted Indium-based Catalysts	<u>Chen-Yu CHOU</u> , Raul F. LOBO	University of Delaware
P1115	K-La-MgO as heterogeneous catalyst to synthesize of 3-(2-hydroxyethyl)-1, 3-oxazolidin-2-one from CO ₂ and diethanol amine	<u>Ganapati D. YADAV</u> , Pooja R. TAMBE	Institute of Chemical Technology
P1116	One pot synthesis of Raspberry ketone over Pd loaded Zn-La bifunctional catalyst	<u>Ganapati D. YADAV</u> , Radhika S. MALKAR	Institute of Chemical Technology
P1117	Transesterification of glycerol and dimethyl carbonate for the synthesis of glycerol carbonate/glycidol using ionic liquids as catalyst	<u>Swapna GADE</u> , Ashutosh KELKAR, Ganpati YADAV	Institute of Chemical Technology, National Chemical Laboratory
P1118	Dealumination of Zn/H-ZSM-5 by steam treatment for the suppression of coke formation in ethane dehydroaromatization	<u>Hikaru SAITO</u> , Satoshi INAGAKI, Qian HAN, Ryota TERUNUMA, Tomohiro YABE, Shuhei OGO, Yoshihiro KUBOTA, Yasushi SEKINE	Waseda University, Yokohama National University
P1119	Ethane dehydroaromatization over Co/H-ZSM-5 catalyst	<u>Ryota TERUNUMA</u> , Hikaru SAITO, Tomohiro YABE, Shuhei OGO, Yasushi SEKINE	Waseda University
P1120	Low temperature steam reforming of methane over Pd-M alloy catalysts in an electric field	<u>Maki TORIMOTO</u> , Shuhei OGO, Shinya FURUKAWA, Takuma HIGO, Tomohiro YABE, Yasushi SEKINE	Waseda University, Hokkaido University
P1121	Tri-reforming of Methane over Ni/La _{0.1} Zr _{0.9} O ₂ Catalysts at Low Temperatures in Electric Field	<u>Tomohiro YABE</u> , Task OGURI, Kensei YAMADA, Shuhei OGO, Yasushi SEKINE	Waseda University
P1122	Low Temperature Catalytic Dry Reforming of Methane over Ni/La-ZrO ₂ in Electric Field	<u>Kensei YAMADA</u> , Tomohiro YABE, Task OGURI, Shuhei OGO, Yasushi SEKINE	Waseda University
P1123	Tri-reforming of methane for syngas production using Ni/X-ZrO ₂ /MgAl ₂ O ₄ catalysts (X= Ce, La, Sm and Y)	Ananda V.P. LINO, Elisabete M. ASSAF, <u>Jose M. ASSAF</u>	Universidade Federal de Sao Carlos, Universidade de Sao Paulo

P1124	Development of Advanced Methane-Utilization Technology with Microwave Heating	Hiroya ISHIMARU, Mai HASEGAWA, Narumi YOSHIDA, Hiroya ISHIKAWA, Fumihiko KODERA, Akihiko MIYAKOSHI	National Institute of Technology, Asahikawa College, Osaka University
P1125	Analysis of active site for methylation of benzene with methane on Co/MFI catalyst with ammonia IRMS-TPD method	Hitoshi MATSUBARA, Koshiro NAKAMURA, Etsushi TSUJI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University
P1126	Synthesis of manganese-based nanoperovskites and their application to aerobic oxidation of methane	Keigo KAMATA, Shuma KAWASAKI, Kosei SUGAHARA, Michikazu HARA	Tokyo Institute of Technology, JST-PRESTO
P1127	Photo-assisted dry reforming of methane over ruthenium loaded strontium titanate	Singgih WIBOWO, Shusaku SHOJI, Kazu TAKEDA, Jiang HAOYANG, Akira YAMAGUCHI, Takeshi FUJITA, Hideki ABE, Masahiro MIYAUCHI	Tokyo Institute of Technology, Tohoku University, National Institute for Materials Science (NIMS)
P1128	Selective oxidation of methane to methanol with molecular oxygen using aqueous Au-Pd colloids at low temperature	Nishta AGARWAL, Simon FREAKLEY, Nikolaos DIMITRATOS, Stuart TAYLOR, Qian HE, Christopher KIELY, Graham HUTCHINGS, Richard LEWIS	Cardiff Catalysis Institute
P1129	Methane Partial Oxidation over $[Cu_2(\mu-O)]^{2+}$ Active Species in Small-, Medium-, and Large-Pore Zeolites	Haris MAHYUDDIN, Aleksandar STAYKOV, Yoshihito SHIOTA, Kazunari YOSHIZAWA	Kyushu University
P1130	Catalytic Performance of a Dicopper-Oxo Complex for Methane Hydroxylation	Yuta HORI, Yoshihito SHIOTA, Tomokazu TSUJI, Masahito KODERA, Kazunari YOSHIZAWA	Kyushu University, Doshisha University
P1131	Effects of pH on selective oxidation of methane into methane oxygenates over Cu-Fe/ZSM-5 catalysts with hydrogen peroxide in water	Min Sik KIM, Eun Duck PARK	Ajou University
P1132	Liquid-phase Oxidation of Methane into Methane Oxygenates	Jong Kyu KANG, Min Sik KIM, Eun Duck PARK	Ajou University
P1133	Synthesis of Ce substituted MFI type zeolites by mechanochemical reaction	Fumiya MUTO, Mami HORIE, Moe SAKAGUCHI, Masafumi NAKAYA, Kiyoshi KANIE, Atsushi MURAMATSU	Tohoku University, JST-CREST
P1134	The effect of Fe site location in Fe-MFI zeolite catalysts on the performance of conversion of methane to methanol with H_2O_2	Peipei XIAO, Yong WANG, Toshiki NISHITOBA, Junko N. KONDO, Toshiyuki YOKOI	Tokyo Institute of Technology, JST PRESTO
P1135	Host-guest property of half spherical type dodecavanadates	Yuji KIKUKAWA, Sayaka UCHIDA, Yoshihito HAYASHI	Kanazawa University, JST-PRESTO, The University of Tokyo
P1136	Effect of Ag and W in nickel based catalyst for methane reforming	CHOHWE KIM, YOUNGCHUL KIM	Chonnam National University
P1137	Oxidative methane conversion by CeO_2 - and NiO-supported MFI zeolite	Mami HORIE, Fumiya MUTO, Yusuke KUNITAKE, Masafumi NAKAYA, Toshiyuki YOKOI, Kiyoshi KANIE, Atsushi MURAMATSU	Tohoku University, Tokyo Institute of Technology, JST-CREST
P1138	Light-driven dry reforming of methane using photons as the energy source	Shusaku SHOJI, Akira YAMAGUCHI, Tomokazu YAMAMOTO, Sho MATSUMURA, Peng XIAOBO, Hideki ABE, Masahiro MIYAUCHI	Tokyo Institute of Technology, Core Research for Evolutional Science and Technology, Kyushu University, National Institute for Materials Science
P1139	Methane dry reforming over Ni/CNFs-SiC monolithic catalyst	Xinhua GAO, Jianli ZHANG, Qingxiang MA, Subing FAN, Guohui YANG, Yoshiharu YONEYAMA, Tian-Sheng ZHAO, Noritatsu TSUBAKI	Ningxia University, University of Toyama
P1140	Influence of a little containing dimethylsulfide on methane steam reforming over Pt/ α - Al_2O_3 catalyst	Kazumasa OSHIMA, Fumihiko WATANABE, Naohiro SHIMODA, Shigeo SATOKAWA	Seikei University
P1141	Effect of zeolite type on the production of ethylene from propylene	Chul Ung KIM, Jong Won JUN, Tae Wan KIM, Joo Wan KIM	Korea Research Institute of Chemical Technology, University of Science of Technology
P1142	Dehydrogenation of ethane on Ga oxide catalysts	Hirofumi SEKI, Hikaru SAITO, Shun MAEDA, Shota MANABE, Tomohiro YABE, Shuhei OGO, Kunihide HASHIMOTO, Yasushi SEKINE	Waseda University, Kubota Corp.
P1143	Selectivity enhancement of CoMo/ Al_2O_3 catalyst in the hydrodesulfurization of FCC gasoline	Cen ZHANG, Zongxuan JIANG, Can Li	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences

P1144	Unsupported layered bimetallic sulfide catalysts and their hydrodenitrogenation performance	Xinyi LIU, Lu WANG, Tiefeng LIU, Zongxuan JIANG, Can LI	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences
P1145	Effects of metal oxide addition to PtSn/MgO-Al ₂ O ₃ catalysts on activity for <i>n</i> -butane dehydrogenation in the presence of steam	Yuki TAKAYAMA, Daiki SAMPEI, Miru HIRAHARA, Masa-aki OHSHIMA, Hitoshi OGIHARA, Hideki KUROKAWA, Hiroshi MIURA	Saitama University
P1146	Inhibition of the catalytic hydrogenation of phenanthrene by organic nitrogen	Jacob VENUTI BJÖRKMAN, Anders ERSSON, Lars J. PETTERSSON	KTH Royal Institute of Technology
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P1148	Catalytic performance of rhodium phosphide for hydrodesulfurization of 4,6-dimethyldibenzothiophene	Yasuharu KANDA, Kota KAWANISHI, Ahmad M F M ALOTAIBI, Taiki TSUJINO, Yoshio UEMICHI	Muroran Institute of Technology, Kuwait Institute for Scientific Research
P1149	NiW/pseudoboehmite+SBA-15 for the Hydrotreating of Waste Sunflower Oil and/or Light Cycle Oil	Jose Miguel HIDALGO HERRADOR, Martin PSENICKA, Jan HORACEK, Zdenek TISLER, Ales VRABLIK, Radek CERNY	Unipetrol Centre for Research and Education
P1150	Catalytic cracking of 4-(1-naphthylmethyl)bibenzyl in sub- and supercritical water	Yoshiharu YONEYAMA, Li TAN, Oyunkhand ERDENEBAATAR, Guoguo LIU, Noriyuki YAMANE, Peipei AI, Akihisa OTANI, Guohui YANG, Noritatsu TSUBAKI	University of Toyama, Nippon Steel and Sumitomo Metal Corporation
P1151	Studies on pore structure modification of Al ₂ O ₃ -based catalyst for the selective hydrodesulfurization of fluid catalytic cracking gasoline	Lei YANG, Haiyan LIU, Tinghai WANG, Xiaojun BAO	China University of Petroleum
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P1153	Efficiency of supported and incorporated W-SBA15 catalytic systems for oxidative desulfurization of sulfur model molecules, model fuels and LGO	Carole LAMONIER, Georgette ESTEPHANE, Christine LANCELOT, Pascal BLANCHARD, Joumana TOUFAILY, Tayssir HAMIEH, Veronique DUFAUD	University of Lille UCSC, Lebanese University, C2P2
P1154	Ni-modified Ir/SiO ₂ catalyst for selective C=C hydrogenation of styrene	Jiaqi BAI, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P1155	Study of catalytic nanomaterials of Pt/ZrO ₂ -WO ₃ and Pt/ZrO ₂ -TiO ₂ -WO ₃ synthesized by Non-Alkoxides Sol-Gel route for hydroisomerization of alkanes	Jorge VERA-ITURRIAGA, Martha L. HERNANDEZ-PICHARDO, J. A. MONTOYA-DE-LA-FUENTE	Instituto Politecnico Nacional, Instituto Mexicano del Petroleo
P1156	Effect of regeneration process through coke combustion and reduction on catalytic activity during <i>n</i> -butane dehydrogenation over PtSn/CeO ₂ catalysts	Daiki SAMPEI, Hayato NAMOTO, Mitsuhiko SATO, Miru HIRAHARA, Masa-aki OHSHIMA, Hitoshi OGIHARA, Hideki KUROKAWA, Hiroshi MIURA	Saitama University
P1157	Oxidative Dehydrogenation of Ethane with CO ₂ over CrO _x Catalysts Supported on Al ₂ O ₃ modified by ZrO ₂ and/or CeO ₂	Tatiana BUGROVA, Valerii DUTOV, Grigory MAMONTOV, Vicente CORTES CORBERAN	Tomsk State University, Institute of Catalysis and Petroleumchemistry CSIC
P1158	Activity and characteristics of regeneration of Pt-Sn/Al ₂ O ₃ catalyst for propane dehydrogenation with conditions	Yi Sun CHOI, Ji Hyun GU, Hyoung Lim KOH	Hankyong National University
P1159	Comparative study of CoMo/MWCNT and CoMo/Al ₂ O ₃ Hydrotreating Catalysts Prepared with Citric Acid	Mariya A. KAZAKOVA, Maxim O. KAZAKOV, Yuliya V. VATUTINA, Oleg V. KLIMOV, Vladimir L. KUZNETSOV, Evgeniy Yu. GERASIMOV, Igor P. PROSVIRIN, Alexander S. NOSKOV	Novosibirsk State University, Boreskov Institute of Catalysis SB RAS
P1160	Octanol dehydration reaction over γ -Al ₂ O ₃ catalyst: effect of pre-calcination temperature	Young-eun KIM, Un Ho JUNG, Min Hye YOUN, Heondo JEONG, Dong Hyun CHUN, Ji Chan PARK, Ki Bong LEE, Kee Young KOO	Korea Institute of Energy Research, Korea University
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P1162	Pure Hydrogen Production from Natural Gas via Fuel Processor based on Steam Reforming with WGS and PSA units	Giuliana ERCOLINO, M. Arsalan ASHARAF, Stefania SPECCHIA	Politecnico di Torino, University of Bath
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P1164	Structure and activity of Ni ₂ P/desilicated β catalysts for hydrocracking of polycyclic aromatics	<u>Yong-Su KIM</u> , Yong-Kul LEE	Dankook University
P1165	Promotional Effect of Ga for Ni ₂ P Catalyst on direct hydrodesulfurization of 4,6-DMDBT	Jung-Geun JANG, Yong-Su KIM, Yong-Kul LEE	Dankook University
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P1167	Mechanistic analysis of active site formation and reaction mechanism of non-oxidative propane dehydrogenation over bare ZrO ₂	Yaoyuan ZHANG, Yun ZHAO, Tatyana OTROSHCHENKO, Olga BULAVCHENKO, Uwe RODEMERCK, David LINKE, Haijun JIAO, Guiyuan JIANG, <u>Evgenii KONDRATENKO</u>	China University of Petroleum, Leibniz-Institute for Catalysis, Boriskov Institute of Catalysis SB RAS
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P2001	Bi-functional cationic Zn-porphyrin polymer for efficient synthesis of cyclic carbonates via cooperative activation pathway	<u>Qihua YANG</u> , Sanjeevi JAYAKUMAR, He LI	Dalian Institute of Chemical Physics
P2002	<i>In situ</i> XPS study of Pt nanoparticles supported on UiO-67 MOFs for CO oxidation	<u>Reza VAKILI</u> , Alex WALTON, Sarayute CHANSAI, Chris HARDACRE, Xiaolei FAN	The University of Manchester
P2003	Acidity and catalytic properties of porous molybdenum oxyhydride obtained by H ₂ reduction of MoO ₃	<u>Takeshi MATSUDA</u> , Hirofumi YAMADA, Shigeto HIRAI, Tomoya OHNO	Kitami Institute of Technology
P2004	Tailored design of Pd catalyst supported on chemically modified silica hollow microspheres for NBR hydrogenation	<u>Jian CHEN</u> , Yuan D. HU, Zhi J. WU, Hai Y. LIU, Pei YUAN	China University of Petroleum, Fuzhou University
P2005	Percolation in thermally conductive catalysts as a key factor for performance in Fischer-Tropsch synthesis	<u>Vladimir Z. MORDKOVICH</u> , Liliya V. SINEVA, Ekaterina V. KULCHAKOVSKAYA, Ilya S. ERMOLAEV, Igor G. SOLOMONIK, Kirill O. GRYAZNOV	Technological Institute for Superhard and Novel Carbon Materials, INFRA Technology Ltd.
P2006	Chemoselective Oxidation of Sulfides by Simple Metal-salen Catalyst	<u>Zhengshuai BAI</u> , Lijun LIN, Shidong WU, Yuanyuan YUE, Haibo ZHU, Pei YUAN, Tinghai WANG, Xiaojun BAO	Fuzhou University
P2007	Manganese oxide mesoporous sphere as supercapacitor for electrochemical deionization	<u>Yu-Shuan LIN</u> , Te-Wang CHEN, <u>Chin-Jung LIN</u>	National Ilan University
P2008	Surface modification of PdZn intermetallic compound via galvanic replacement reaction and their catalytic properties for phenylacetylene hydrogenation	<u>Masayoshi MIYAZAKI</u> , Tomoaki TAKAYAMA, Shinya FURUKAWA, Takayuki KOMATSU	Tokyo Institute of Technology, Hokkaido University
P2009	Kinetic Study of Hydrodeoxygenation of Cresols over Ni ₃ P and Ce-promoted Ni ₃ P	<u>Yao WANG</u> , Zhiquan YU, Zhichao SUN, Jiao HAO, Fanxing MENG, Anjie WANG	Dalian University of Technology

P2010	Synthesis of Carbon-Supported Pd-Co Bimetallic Catalysts Templated by Co Nanoparticles for Selective Hydrogenation	<u>Takeharu YOSHII</u> , Kazuki NAKATSUKA, Yasutaka KUWAHARA, Kohsuke MORI, Hiromi YAMASHITA	Osaka University, Kyoto University, JST-PRESTO
P2012	Development, Characterization and Catalytic Study of Novel NiO/GDC Materials for Hydrogen Production	<u>Angel CARAVACA</u> , Sebastien PICART, Ioanna KALAITZIDOU, Ghada BEN-HAMAD, Mimoun AOUINE, Benedict ARAB-CHAPELET, Philippe VERNOUX, Thibaud DELAHAYE	IRCELYON CNRS, CEA Marcoule
P2013	Preferential dissolution of copper in CuMnO _x : effect of the starting binary oxide to get new efficient γ -MnO ₂ -like catalysts	zhiping YE, <u>jean-marc GIRAUDON</u> , jean-francois LAMONIER	The University of Lille
P2014	Low temperature ethylene oxidation over platinum based bimetallic catalyst supported on mesoporous silica	<u>Jun HIRAYAMA</u> , Shazia S SATTER, Nobuhiro ISHITO, Kiyotaka NAKAJIMA, Atsushi FUKUOKA	Hokkaido University
P2015	Aerobic Oxidation of Trace Ethylene at Low Temperature over Platinum Nanoparticle on Hydrophobic Mesoporous Silica Support	<u>Shazia S. SATTER</u> , Kiyotaka NAKAJIMA, Atsushi FUKUOKA	Hokkaido University
P2016	Ruthenium loaded 12CaO·7Al ₂ O ₃ as a chlorine-tolerant catalyst for ammonia synthesis	<u>Jiang LI</u> , Masaaki KITANO, Tian-Nan YE, Masato SASASE, Toshiharu YOKOYAMA, Hideo HOSONO	Tokyo Institute of Technology, JST ACCEL
P2017	Product Selectivity Controlled by Steric Adsorption in Zeolite Micropores over a Pd@Zeolite Catalyzed Hydrogenation of Nitroarene	<u>Jian ZHANG</u> , Liang WANG, Feng-Shou XIAO	Zhejiang University
P2018	CO and CO ₂ methanation over promoted Ni/Al@Al ₂ O ₃ catalysts	Thien An LE, Tae Wook KIM, Jieun KIM, Jong Kyu KANG, <u>Eun Duck PARK</u>	Ajou University
P2019	Ni and Co promoted MoW alumina supported HDS catalysts prepared from mixed SiMo ₃ W ₉ heteropolyacids	<u>Maria NIKULSHINA</u> , Alexander MOZHAEV, Christine LANCELOT, Maya MARINOVA, Pascal BLANCHARD, Edmond PAYEN, Carole LAMONIER, Pavel NIKULSHIN	Samara State Technical University, University Lille 1, Institut Chevreul, All-Russian Research Institute of Oil Refining
P2020	Template-free Synthesis of Mesoporous Titanosilicates as Low-cost Solid Acid Catalysts for Biodiesel Fuel Production	<u>Albert CHANG</u> , Jyun-Hong PAN, Nien-Chu LAI, Takehisa MOCHIZUKI, Makoto TOBA, Shih-Yuan CHEN, Chia-Min YANG	National Tsing Hua University, National Institute of Advanced Industrial Science and Technology (AIST)
P2021	Controllable Synthesis of Pt-Sn Bimetallic Catalyst from Surface Chemistry Approach for Propane Dehydrogenation to Propylene	<u>Haibo ZHU</u> , Yuanyuan YUE, Xiaojun BAO	Fuzhou University
P2022	Ceramic Hollow Fiber based Catalytic Modules	<u>R. Nandini DEVI</u> , Ulhas K KHARUL, Thundiyil SHIBIN, Shunottara JOGDAND, Pavan DONGAPURE	CSIR-National Chemical Laboratory
P2023	Simple and green synthesis of LaMO ₃ perovskites (M= Mn, Fe, Co) by reactive grinding; properties in toluene oxidation reaction	Bertrand HEIDINGER, Houshang ALAMDARI, Sebastien ROYER, Jean-Marc GIRAUDON, <u>Jean-Francois LAMONIER</u>	Univ. Lille, Laval University
P2024	Hierarchical ZSM-5 Zeolite Synthesized from Natural Rectorite Mineral without a Secondary Template	<u>Yanni ZHOU</u> , Yuanyuan YUE, Haiyan LIU, Xiaojun BAO	State Key Laboratory of Heavy Oil Processing
P2025	Epoxides assisted synthesis of MOF MIL-101-Cr and its application as high selective adsorbent of organic nitrogen hetero molecules present in diesel fuel	Roberto GARCIA DE LEON, J. Ascension MONTOYA DE LA FUENTE, Rodolfo MORA VALLEJO, Edith MENESES RUIZ, Vicente PAZ DEL ANGEL, <u>Heriberto DIAZ VELAZQUEZ</u>	Instituto Mexicano del Petroleo, Mexican Petroleum Institute
P2026	Product Selectivity Controlled by Zeolite Crystals in Reactions over Palladium Catalysts	<u>Liang WANG</u> , Feng-Shou XIAO	Zhejiang University
P2028	Preparation of Polycrystalline Pt Nanosheets Using Graphene Oxide Template and Evaluation of Their Catalytic Performance for PEFC	<u>Kojiro SUGIYAMA</u> , Sakae TAKENAKA	Doshisha University
P2029	Preparation of Pt metal nanosheets using graphene oxide as template	<u>Hiroki ARITA</u> , Sakae TAKENAKA	Doshisha University
P2030	Cooperative Effects of Mesoporosity and Defect Sites of Zeolite on the Resistance to Coke Formation	<u>Songhyun LEE</u> , Kyungho LEE, Minkee CHOI	Korea Advanced Institute of Science and Technology
P2031	Effects of Carbon Nanostructures on Catalytic Properties and Stability in Oxidative Dehydrogenation	<u>Han Chang KWON</u> , Sunwoo YOON, Minkee CHOI	Korea Advanced Institute of Science and Technology

P2032	Self-promoted LaCoSi Catalyst for N ₂ Activation and the Mechanism	Jiazhen WU, Yutong GONG, Masaaki KITANO, Junjie WANG, Tian-Nan YE, Jiang LI, Yasukazu KOBAYASHI, Kazuhisa KISHIDA, Hitoshi ABE, Yasuhiro NIWA, Hongsheng YANG, Tomofumi TADA, Hideo HOSONO	Tokyo Institute of Technology, JST-ACCEL, High Energy Accelerator Research Organization, The Graduate University for Advanced Studies
P2033	Mesoporous polymeric carbon nitride and its composites as metal-free catalysts for the selective hydrogenation of phenylacetylene to styrene	Dilgam TAGIYEV, Vagif AKHMEDOV, Natalya MELINKOVA, Habib NURULLAYEV, Vusal AHMADOV	Institute of Catalysis and Inorganic Chemistry
P2034	Adjusted interactions of nickel nanoparticles with cobalt-modified MgAl ₂ O ₄ -SiC for an enhanced catalytic stability during steam reforming of propane	Kyung Soo PARK, Minji SON, Myung-June PARK, Joon-Hwan CHOI, Jong Wook BAE	Sungkyunkwan University (SKKU), Ajou University, Korea Institute of Materials Science (KIMS)
P2035	Preparation and characterization of sea-urchin like TiO ₂ microsphere	Xin LIU, Hajime HOJO, Hisahiro EINAGA	Kyushu University
P2036	Catalytic MnO ₂ -Pt Nanohybrid for CO Oxidation: Insights on the Crystallographic and Mechanistic Aspects	Noopur JAIN, Ahin ROY, N. RAVISHANKAR	Indian Institute of Science
P2037	Hydrogenation of carbon dioxide to methanol with fluorinated Cu/ZnO/ZrO ₂ -catalysts	Marius WEBER, H. HILLEBRECHT, I. KROSSING	FMF - Freiburg Materials Research Center
P2038	Mechanistic insights into hexane conversion to aromatics over gallium embedded zeolites	Anawat THIVASASITH, Thana MAIHOM, Jumras LIMTRAKUL, Chularat WATTANAKIT	Vidyasirimedhi Institute of Science and Technology, Kasetsart University
P2039	Architecting Novel Metal Sulfide Photocatalysts for Highly Efficient Resource Utilization of H ₂ S	Meng DAN, Ying ZHOU	Southwest Petroleum University
P2040	Formation of Pd-group VIII bimetallic nanoparticles by the "water-in-oil" microemulsion method	Tomasz SZUMELDA, Alicja DRELINKIEWICZ, Dorota DURACZYNSKA, Robert KOSYDAR, Jacek GURGUL	Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences
P2042	Magnetic nanobiochar as an efficient heterogeneous acid catalyst for esterification reaction	ANIS KRISTIANI, S.N. AISYIYAH JENIE, EVI ELMAMAZE, SUDIYARMANTO SUDIYARMANTO, KAORU TAKEISHI	Indonesia Institute of Sciences (LIPI), Shizuoka University, Pamulang University
P2043	Synthesis of aluminum based core-shell metal-ceramic microstructures for catalyst materials and selective CO oxidation	Jieun KIM, Tae Wook KIM, Doohwan LEE, Eun Duck PARK	Ajou University, University of Seoul
P2044	Ceramometal macroporous CuAlO/CuAl, CuFeAlO/CuFeAl catalysts for low temperature WGS reaction	Serguei F. TIKHOV, Tatyana MINYUKOVA, Konstantin VALEEV, Natalia SHTERZER, Svetlana CHEREPANOVA, Aleksei SALANOV, VLADISLAV SADYKOV	Borisevsk Institute of Catalysis, Novosibirsk State University
P2045	Glucose oxidation over activated carbon-supported gold clusters	Junying ZHANG, Chao LIU, Jiahui HUANG	Dalian Institute of Chemical Physics
P2046	State-controlled Rh nanoparticles synthesized via microwave-assisted alcohol reduction and their catalysis of CO oxidation	Yoshihide NISHIDA, Katsutoshi SATO, Katsutoshi NAGAOKA	Oita University, Kyoto University
P2047	Ammonia synthesis reactions over inorganic-organic hybrid catalysts of metal hydride-conjugated macromolecule composites	Akihiro YOSHIDA, Shota TSURUMI, Wataru UEDA, Guoqing GUAN	Hirosaki University, Kanagawa University
P2048	Ammonia Synthesis over Cs- or Ba-Promoted Ruthenium Catalyst Supported on Strontium Niobate	Minxuan CHEN, Mingwei YUAN, Jinjun LI, Zhixiong YOU	Wuhan University, International Cooperation Base for Sustainable Utilization of Resources and Energy in Hubei Province
P2049	Controllable synthesis of Ru nanocrystallites on graphene substrate as a catalyst for ammonia synthesis	Mingwei YUAN, Jieming ZHAO, Jiande ZHOU, Zhixiong YOU	Wuhan University, International Cooperation Base for Sustainable Utilization of Resources and Energy in Hubei Province
P2050	Synthesis and catalytic application of FER/MOR composite zeolite	Xiujie LI, Xiangxue ZHU, Zhiqiang YANG, Longya XU	Dalian Institute of Chemical Physics, BP (China) Holdings Limited Dalian Branch
P2051	Introduction of Sb into trigonal Mo ₃ VO _x oxide and its crystal transformation to orthorhombic Mo ₃ VO _x by heat treatment	Shoma INUKAI, Satoshi ISHIKAWA, Wataru UEDA	Kanagawa University
P2052	Precise-Control Synthesis of α -/ β -MnO ₂ Materials by Adding Zn(acac) ₂ as a Phase Transformation-Inducing Agent and Their ORR Performance	Ningqiang ZHANG, Lingcong LI, Guizhen ZHANG, Hong HE	Beijing University of Technology, Collaborative Innovation Center of Electric Vehicles in Beijing
P2053	Selective semihydrogenation of alkynes to alkenes over solid acid supported palladium catalysts	Yan XIE, Lili WANG, Feng LIN, Jiahui HUANG	Dalian Institute of Chemical Physics
P2054	Synthesis of flower-like structured FeSi ₂ and its application to the degradation of dye molecules in water	Tatsuki MINAMI, Takashi KAMEGAWA	Osaka Prefecture University

P2055	Effect of microwave and conventional oven drying methods in the synthesis of vanadium phosphorus oxide catalysts via sesquihydrate route	<u>Loong Kong LEONG</u> , Jo Yee KANG, Yeow Hong YAP	Universiti Tunku Abdul Rahman
P2056	Morphologically uniform Co ₃ O ₄ hexagonal plates of the (112) facets with surface Fe/Mn doping and Au loading: Exceptionally active for catalytic combustion of benzene	Wu JIANG, Yina FENG, Linli GU, Yao YAO, <u>Weijie JI</u> , Chark-Tong AU	Nanjing University, Hong Kong Baptist University
P2058	Controlled synthesis of the Al-rich zeolites of 'BEA structure	Radim PILAR, Galina SADOVSKA, Dalibor KAUCKY, Jana PASTVOVA, Petr SAZAMA	J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
P2059	Meso/macroporous ceramics for catalytic conversion of lignocellulosic biomass into chemicals of industrial interest	<u>Maria COSTA</u> , Eduardo FERREIRA, Hellmut ECKERT	University of Sao Paulo
P2060	Effect of Ti Species Dosage on the Photocatalytic Performance of HNbMoO ₆	<u>Lifang HU</u> , Jichao ZHU, Jie HE	Anhui University of Science and Technology
P2061	Facile Access to Amides from Oxygenated or Unsaturated Organic Compounds by Metal Oxides Nanocatalysts Derived from Single-source Molecular Precursors	<u>Akbar MOHAMMAD</u> , Prakash CHANDRA, Topi GHOSH, Mauro CARRARO, M. Mobin SHAIKH	Indian Institute of Technology Indore, University of Padova
P2062	Constrained Growth of MoS ₂ Nanosheets within a Mesoporous Silica Shell and Its Effects on Defect Sites and Catalyst Stability for H ₂ S Decomposition	<u>Kelvin M. KWOK</u> , Sze Wei Daniel ONG, Luwei CHEN, Hua Chun ZENG	National University of Singapore, Institute of Chemical and Engineering Sciences A*STAR
P2063	Facile fabrication of mesoporous silica-based natural rubber nanocomposite with enhanced thermal stability	<u>Supphathee CHAOWAMALEE</u> , Chawalit NGAMCHARUSSRIVICHAI	Chulalongkorn University
P2064	A facile solvothermal synthesis of magnetite nanoparticles controlled in size and shape	Chen SHEN, Kiyoshi KANIE, Masafumi NAKAYA, Atsushi MURAMATSU	Tohoku University
P2065	Catalytic Conversion of Carbohydrates into 5-HMF on Reduced Graphene Oxide Supported Metal Catalysts	<u>Yui HIRANO</u> , Hitomi OHMAGARI, Jorge BELTRAMINI, Shinya HAYAMI	Kumamoto University, The University of Queensland
P2066	A Study of Light-Element Boron Doped Palladium Nanoparticles on the Structure and Catalytic Behavior	<u>Tianyi CHEN</u> , Edman TSANG, Peter NELLIST	University of Oxford
P2067	Template-Framework Interactions in Tetraethylammonium-Directed Zeolite Synthesis	<u>Joel E. SCHMIDT</u> , Donglong FU, Michael W. DEEM, Bert M. WECKHUYSEN	Utrecht University, Rice University
P2068	Thermochemically Stable Poison-Containing Polymer Support for Highly Selective Partial Alkyne Hydrogenation	<u>Hoyong BAEK</u> , Seongho YUN, Songhyun LEE, Minkee CHOI	Korea Advanced Institute of Science and Technology
P2069	Hierarchical Fe ₂ O ₃ @mesoporous silica for catalytic activity enhancement to Fenton-like reaction	<u>Zhimin CUI</u> , Jing HAO	Beihang University
P2070	Noncontact Synergistic Effect between Au Nanoparticles and the Fe ₂ O ₃ Spindle Inside a Mesoporous Silica Shell as Studied by the Fenton-like Reaction	<u>Zhe CHEN</u>	North China Electric Power University
P2071	SBA-1 supported tungsten and molybdenum oxide-based catalysts for propylene metathesis	<u>Piotr MICHORCZYK</u> , Adam WEGRZYNIAK, Adam WEGRZYNOWICZ, Jaroslaw HANDZLIK	Cracow University of Technology
P2072	Core-shell Nanomaterials: Synthesis and Applications in Catalysis	Anandarup GOSWAMI, Rajender S VARMA, Radek ZBORIL, <u>Manoj B GAWANDE</u>	Palacky University
P2073	Novel boron complexes based on O donor atom ligands 2,2'-(propane-1,3-diylbis(azan-1-yl-1-ylidene))bis(methane-1-yl-1-ylidene)diphenol	<u>Khadichakhan RAFIKOVA</u> , Alexey ZAZYBIN, Valentina YU, Manshuk TURSINBEKOVA, Aygerim KHISMET, Murat AYDEMIR, Salih PASA, Hamdi TEMEL, Saule MERGENBAYEVA, Akezhan KAPASOV, Samal RAKHMATULLA	Satbayev University, Kazakh-British Technical University, Institute of Chemical Sciences named after A.B. Bekturov, University of Dicle, Afyon Kocatepe University
P2074	Bifunctional Ionic Liquids Derived from Biorenewable Sources as Sustainable Catalysts for Fixation of Carbon Dioxide	<u>Vitthal SAPTAL</u> , Bhalchandra BHANAGE	Institute of Chemical Technology
P2075	Direct hydroxymethylation of furfural towards HMF over solid acid catalyst	<u>Shun NISIMURA</u> , Atsuki SHIBATA, Kohki EBITANI	Japan Advanced Institute of Science and Technology
P2076	Effect of metal amounts for catalytic activity and structure in Pt-MoO _x /TiO ₂ for selective hydrodeoxygenation of 2-furancarboxylic acid to valeric acid	<u>Takehiro ASANO</u> , Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P2077	Synthesis of mordenite from natural aluminosilicate clay minerals	<u>Fantao MENG</u> , Yuanyuan YUE, Xiaojun BAO, Haiyan LIU	China University of Petroleum(Beijing)
P2078	Formation of Heavier Alcohols and C ₈ Aromatics via Ethanol Upgrading Reactions on Hydroxyapatite	<u>Takahiko MOTEKI</u> , David W FLAHERTY	The University of Tokyo, University of Illinois
P2079	Understanding the Surface Modification of Heterogeneous Catalyst for Hydrolytic Depolymerization of Cellulose: Correlation among Average Molecular Weight, Crystallinity of Polysaccharides and Hydrolytic Efficiency	<u>Hao-Ju CHOU</u> , Jia-Hui WANG, Guo-Chuan YANG, Po-Wen CHUNG	Academia Sinica
P2080	Continuous catalytic cracking of plastics using fluidized bed - Activity of the metal oxide catalyst -	<u>Yoshinori SATO</u> , Noriyasu OKAZAKI	Kitami Institute of Technology

P2081	Hydrogenation and Ring-Opening of 5-Hydroxymethylfurfural to 1,2,6-Hexanetriol over Pt/Al ₂ O ₃ Catalyst	<u>Hsiang-Ling SUNG</u> , Chia-wen WU	National Taiwan University
P2082	Steam Reforming of Tar from Pyrolyzed Biomass over Supported Ni-Mn Catalyst at Lower Temperature	<u>Nway Nay HLAING</u> , Kazuya KAWAHARA, Osamu NAKAGOE, Akihide SANO, Guobin ZHENG, Shuji TANABE	Nagasaki University, Yangan Technological University
P2083	Effect of solvents on reactions of lignin-related compounds over iron-oxide based catalyst for selective production of phenol	<u>Takuya YOSHIKAWA</u> , Kanta YAMAGUCHI, Yuki KAWAMATA, Yuta NAKASAKA, Yoshihito KOYAMA, Eri FUMOTO, Shinya SATO, Teruoki TAGO, Takao MASUDA	Hokkaido University, Idemitsu Kosan Co.,Ltd., National Institute of Advanced Industrial Science and Technology, Tokyo Institute of Technology
P2084	Catalytic Role of Active Sites on Mo-Doped MCM-41 Zeolite for the Aerobic Oxidation of 5-Hydroxymethylfurfural to 2,5-Diformylfuran	<u>ZhaoMeng WANG</u> , Liangfang ZHU, <u>HuaQing YANG</u> , Changwei HU	Sichuan University
P2085	An integrated process for diesel range precursors from biomass: Furfural extraction, furfural to 2-methylfuran and condensation to fuels	<u>Hari Prasad Reddy KANNAPU</u> , Cheonwoo JEONG, Young-Woong SUH	Hanyang University
P2086	Adsorption Mechanisms of Lithium Polysulfides on Graphene-Based Interlayers in Lithium Sulfur Batteries	<u>Chi-you LIU</u> , Elise Y. LI	National Taiwan Normal University
P2087	Direct transformation of cellulose into ethanol catalysed by tungstic acid and zirconia supported Pt nanoparticles in water	<u>Weiping DENG</u> , Shi LI, Haiyan SONG, Pan WANG, Qinghong ZHANG, Ye WANG	Xiamen University
P2088	Lignin Depolymerization with Novel Brønsted Acidic Ionic Liquid	<u>Zheng-Yen WANG</u> , Babasaheb M. MATSAGAR, Kevin C.-W. WU	National Taiwan University
P2089	A Computational Exploration on CO ₂ Reduction Mechanism via CO Dimerization on Copper Oxide Surface	<u>Chun-Chih CHANG</u> , Elise Y. LI, <u>Ming-Kang TSAI</u>	National Taiwan Normal University
P2090	Selective Glucose Isomerization to Fructose Using A Heterogeneous Immobilized Tertiary Amines with Tuned Molecular Design	<u>Nicholas A. BRUNELLI</u> , Nitish DESHPANDE, Lagnajit PATTANAIK, Mariah R. WHITAKER	The Ohio State University
P2091	Methanol-to-Olefins Catalysis with Dealuminated Template-free SSZ-13 Zeolites	<u>Yong WANG</u> , Toshiki NISHITOBA, Xiangju MENG, Feng-shou XIAO, Xiulian PAN, Xinhe BAO, Chuan SHI, Weiping ZHANG, Hermann GIES, Dirk DE VOS, Ute KOLB, Ahmad MOINI, Mathias FEYEN, Robert McGUIRE, Stefan MAURER, Ulrich MÜLLER, Toshiyuki YOKOI	Tokyo Institute of Technology, Zhejiang University, Dalian Institute of Chemical Physics, Dalian University of Technology, Ruhr-Universität Bochum, K. U. Leuven, Johannes Gutenberg-Universität Mainz, BASF Corporation, BASF SE
P2092	Lanthanum-doped mesoporous strontium titanate for transesterification of palm oil with methanol to fatty acid methyl esters	<u>Chawalit NGAMCHARUSSRIVICHAI</u> , Boontawee LERTPANYAPORNCHAI, Polthep SUKPANICH, Junko N. KONDO, Toshiyuki YOKOI	Chulalongkorn University, Tokyo Institute of Technology
P2093	Recyclable Cu-Fe Catalysts Derived from Cu-Fe Layered Double Hydroxides for Acceptorless Dehydrogenation of Alcohols	<u>Wahyu Satpriyo PUTRO</u> , Takayoshi HARA, Nobuyuki ICHIKUNI, Shogo SHIMAZU	Chiba University
P2094	Acid-basic property of YNbO ₄ for lactic acid formation from glucose in water	<u>Minjune KIM</u> , Hideki KATO, Atsushi FUKUOKA, Kiyotaka NAKAJIMA	Hokkaido University, Tohoku University
P2095	Promotional Role of Water for Steering the Product Selectivity in Levulinic Acid Hydrogenation	<u>GAYATRI B. KASAR</u> , P. N. BHOSALE, C. V. RODE	CSIR-National Chemical Laboratory, Shivaji University
P2096	Production of isoprene by pyrolysis of algae-producing oil derived from squalene	<u>Kazuya KIMURA</u> , Kazuma SHIRAIISHI, Junji NAKAMURA, Tadahihiro FUJITANI	University of Tsukuba, National Institute of Advanced Industrial Science and Technology
P2097	Low Temperature Synthesis of Hydrogen Titanate Nanotubes and Their Solid Acidity for Conversion of Glucose into 5-(Hydroxymethyl)furfural	<u>Misaki OTA</u> , Yuichiro HIROTA, Yoshiaki UCHIDA, Norikazu NISHIYAMA	Osaka University
P2098	Vapor-phase lactonization of levulinic acid into angelicalactones	<u>Daolai SUN</u> , Yuta TAKAHASHI, Yasuhiro YAMADA, Satoshi SATO	Chiba University, Hebei University of Technology
P2099	PdRuPVP catalyzed hydrogenation of quinolines under mild reaction conditions	<u>Chandan CHAUDHARI</u> , Katsutoshi SATO, Katsutoshi NAGAOKA	Oita University, Kyoto University
P2100	Catalytic upgrading of lignin model compound into transportation fuel by using Ti-MCM-41 mesoporous supported Cu-Ni catalyst	<u>Hwei Voon LEE</u> , Murtala M. AMBURSA, Joon Ching JUAN, Yun Hin TAUFUQI-YAP	Univeristy of Malaya, Kebbi State University of Science and Technology Aliero, Universiti Putra Malaysia
P2101	Direct Synthesis of Liquefied Petroleum Gas from Syngas over H-ZSM-5 Enwrapped Pd-based Zeolite Capsule Catalyst	<u>Peipei ZHANG</u> , Yang WANG, Guohui YANG, Yoshiharu YONEYAMA, Noritatsu TSUBAKI	University of Toyama
P2102	Nanosized aluminogallosilicate MFI zeolites in methanol aromatization: the catalytic nature of framework and non-framework Ga species	<u>Yu-Ying CHEN</u> , Chi-Ying HSIEH, Yu-Chuan LIN	National Cheng Kung University

P2103	Sub 1 nm aggregation-free AuPd nanocatalysts for visible-light-driven hydrogen evolution from formaldehyde	Xiao LIU, Shengbo ZHANG	Central China Normal University, Tianjin University
P2104	Effect of washing condition with ammonia aqueous solution on the properties and catalytic performances of the prepared Ru-based catalysts for ammonia decomposition	Hiroki KURIBARA, Takeshi FURUSAWA, Kenta WATANABE, Masahide SATO, Noboru SUZUKI	Utsunomiya university
P2105	Hydro-demethylation mechanism of toluene over Pt catalyst by DFT calculations	Kenta TOKO, Shota MANABE, Atsushi NAKANO, Tomohiro YABE, Shuhei OGO, Tomomi NAGATSUKA, Yuichiro HIRANO, Yasushi HASHIMOTO, Hideshi IKI, Yasushi SEKINE	Waseda University, JXTG Nippon Oil and Energy Corp
P2106	Steam reforming of aromatic hydrocarbon in electric field at low temperature	Kent TAKISE, Keisuke MURAGUCHI, Shuhei OGO, Yasushi SEKINE	Waseda University
P2107	Steam reforming of dimethyl ether by surface protonics in an electric field	Reona INAGAKI, Ryo MANABE, Tomohiro YABE, Shuhei OGO, Yasushi SEKINE	Waseda University
P2108	Toluene steam reforming reaction on Co supported perovskite catalyst	Keisuke MURAGUCHI, Kent TAKISE, Shota MANABE, Tomohiro YABE, Shuhei OGO, Yasushi SEKINE	Waseda University
P2109	A composite Ta ₃ N ₅ photoanode with ultrahigh photocurrent and stability for solar water oxidation	Yongle ZHAO, Jingying SHI, Can LI	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences
P2110	Effect of Ba addition on Ni/Al ₂ O ₃ catalyst for the steam reforming of naphthalene/benzene as tar model compounds	Yoshito INAGAWA, Koshiro IIMURA, Takeshi FURUSAWA, Masahide SATO, Noboru SUZUKI	Utsunomiya University
P2111	Influence of CO ₂ feed on steam reforming of toluene over supported Ni catalyst of Ni/Mg/Al catalyst.	Mii BETCHAKU, Yoshinao NAKAGAWA, Masazumi TAMURA, Keiichi TOMISHIGE	Tohoku university
P2112	Effect of support ZrO ₂ on selective methanation of CO over the nickel supported catalysts	Lu ZHANG, Hongwei MA, Zhiming GAO	Beijing Institute of Technology
P2113	Electrocatalytic Oxygen Reduction over Co@Co ₃ O ₄ /N-doped Porous Carbon Synthesized by Pyrolysis of ZIF-8/67 on Cellulose Nanofibers	Yu-Ri LEE, Hyeonseok YOO, Jinsub CHOI, Wha-Seung AHN	Inha University
P2114	Scalable Synthesis of Bifunctional Multi-elements Electrocatalysts with Tailored Morphological and Electronic Properties for Superior Overall Water Splitting	Xiaomei WANG, Weiguang MA, Zhiqiang XU, Xu ZONG, Can LI	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences
P2115	Pd Nanoparticles supported on a Microporous Covalent Triazine Polymer for Hydrogen production from Formic Acid Decomposition	Siqian ZHANG, Bomi KIM, Pillaiyar PUTHIARAJ, Young-Min CHUNG, Wha-Seung AHN	Inha University, Kunsan National University
P2116	A manganese modified Fe ₃ O ₄ microsphere catalyst with effective active phase of forming light olefins from syngas	Yi LIU, Jun BAO, Yi ZHANG	Beijing University of Chemical Technology, University of Science and Technology of China
P2117	Properties of active sites on CoPt/TiO ₂ Fischer-Tropsch synthesis catalysts affected by plasma treatment	Jingping HONG, Juan DU, Yuhua ZHANG, Jinlin LI	South-Central University for Nationalities
P2118	Effect of gallium as an additive on activated carbon-supported cobalt catalysts for synthesis of higher alcohols by CO hydrogenation	shan GAO, yuyang LI, youzhu YUAN	Xiamen University
P2119	Conversion of palm fatty acid distillates to renewable biofuel additives over Ti-grafted mesoporous silica nanospheres	Shih-Yuan CHEN, Supranee LAO-UBOL, Masayasu NISHI, Takehisa MOCHIZUKI, Hideyuki TAKAGI	National Institute of Advanced Industrial Technology, Thailand Institute of Scientific and Technological Research (TISTR)
P2120	Catalytic conversion of microalgae into tar free methane- and hydrogen-rich syngas using millisecond steam gasification	Pratik Vinayak GHOLKAR, Akshat TANKSALE, Yogendra SHASTRI, Suman MAJUMDAR	IITB Monash Research Academy, Monash University, Indian Institute of Technology Bombay, JSW Centre
P2121	The influence of modifiers (Ga and Zr) on the performance of CuZn catalysts for carbon dioxide hydrogenation to methanol	Bongokuhle S. XABA, Holger FRIEDRICH, Abdul MAHOMED, Sooboo SINGH	University of KwaZulu-Natal
P2122	K-promoted Ni-Mo phyllosilicate catalysts for the synthesis of higher alcohols from syngas	Fanfan ZHANG, Yuyang LI, Shan GAO, Huihuang FANG, Xuelian LIANG, Youzhu YUAN	Xiamen University
P2123	NH ₃ synthesis using combination of Ru catalyst, hydrogen-permeable membrane, and phosphate electrolyte from N ₂ and H ₂ O by electricity	Kanako IMAMURA, Jun KUBOTA	Fukuoka University
P2124	Effects of Al promoter on novel heterogeneous mesoporous Rh-C ₃ N ₄ for liquid-phase carbonylation of methanol to acetic acid	Da Mi KIM, A Rong KIM, Tae Sun CHANG, Beom Sik KIM, Jong Wook BAE	Sungkyunkwan University, Korea Research Institute of Chemical Technology(KRICT)
P2125	Phenol etherification with methanol to anisol on supported Cs catalysts	Tianyin DENG, Lijuan GAO, Deting KONG	National Institute of Clean-and-low-carbon Energy

P2126	Size Effect of Carbon-Supported Pd Nanoparticles in the Hydrogen Production from Formic Acid	Miriam NAVLANI-GARCIA, Kohsuke MORI, Yasutaka KUWAHARA, Hiromi YAMASHITA	Osaka University, JST PRESTO, Kyoto University
P2127	Lignin catalytic hydroconversion: a semi-continuous experimental study	Junjie PU, Dorothee LAURENTI, Isabelle PITAULT, Melaz TAYAKOUT, Christophe GEANTET	Univ. Lyon
P2128	Supported indium oxide as a selective catalyst for carbon dioxide to methanol hydrogenation	Anastasiya BAVYKINA, Irina YARULINA, Lieven GEVERS, Samy OULD-CHIKH, Jorge GASCON	King Abdullah University of Science and Technology
P2129	In-situ synthesis of SAPO-34@kaolin composite catalyst for methanol to olefins	Lina ZHANG, Haiyan LIU, Xiaojun BAO	China University of Petroleum, Fuzhou University
P2130	Hydrodeoxygenation of vicinal OH groups in methyl glycosides over palladium modified CeO ₂ supported rhenium catalyst	Ji CAO, Naoto YUASA, Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University
P2131	Facile electrochemical synthesis of transition metal (oxy)hydroxide as oxygen evolution electrocatalyst	Young kyeong KIM, Jin Hyun KIM, Jae Sung LEE	Ulsan national Institute of Science and Technology (UNIST)
P2132	CO and CO ₂ methanation over Ni/SiC and Ni/SiO ₂ catalysts	Thien An LE, Tae Wook KIM, Jieun KIM, Jong Kyu KANG, Eun Duck PARK	Ajou University
P2133	Synthesis of iridium oxide nanosheets and its activity for oxygen evolution reaction	Daisuke TAKIMOTO, Dai MOCHIZUKI, Wataru SUGIMOTO	Shinshu University
P2134	Enhancements Electrocalalytic Performance of N and O Atomic Co-doped Carbon Electrodes for Vanadium Redox Flow Battery.	Hyebin LIM, Sungcheol KIM, Doohwan LEE	University of Seoul
P2135	Study on tricyclopentadiene hydrogenation using pellet-type Ru catalyst	Youri PARK, Yongin YOU, Dohyun JO, Jinha PARK, Seung ho HAN, Jeongsik HAN, Tae-Soo KWON, Jong-Ki JEON	Kongju National University, Agency for Defense Development (Korea), Poongsan R&D Institute
P2136	Oxidative dehydrogenation of ethane and subsequent CO ₂ activation on iron oxide-impregnated TiO ₂ for chemical looping application	Min Hye JEONG, Jong Wook BAE	The University of Sungkyunkwan
P2137	Understanding Exothermic Catalytic Decomposition of Ionic Liquids Under Anaerobic Conditions: New Structure Functionality Relationships	Merve KURT, Emrah OZENSOY, Kerem Emre ERCAN, Haci ESİYOK	Bilkent University
P2138	Synergy of Ru and Ir electrocatalysts supported on Ketjenblack for Selective Electrohydrogenation of Toluene to Methylcyclohexane	Yuta INAMI, Hitoshi OGIHARA, Ichiro YAMANAKA	Tokyo Institute of Technology
P2139	Improvement in Durability of Carbon Black-Supported Pt Cathode Catalysts Available Commercially for PEFC by Silica-Coating	Masaki GOTO, Yasuyuki MASUDA, Sakae TAKENAKA	Doshisha University
P2140	Alkali promotion of iron oxide based catalyst for water gas shift reaction	Ryo WATANABE, Kengo TAJIMA, Yuya FUSHIMI, Nozomu HIRATA, Choji FUKUHARA	Shizuoka University
P2141	Influence of reaction conditions on catalytic ammonia synthesis using Ru/MgO-CeO ₂ prepared by different methods	Rahat JAVAID, Tetsuya NANBA	National Institute of Advanced Industrial Science and Technology (AIST)
P2142	Selective adsorption of toluene on perovskite oxides for the organic hydride method	Yu NUMAO, Tomohiro SUZUKI, Keiri SHIONO, Tomohiro YABE, Shuhei OGO, Yasushi SEKINE	Waseda University
P2143	Oxymethylene Dimethyl Ether Synthesis Starting from Dimethoxymethane and Monomeric Formaldehyde	Andreas PETER, Mohamed OUDA, Achim SCHAADT, Eberhard JACOB, Ingo KROSSING	Albert-Ludwigs University, Fraunhofer ISE, Motors Emissions Concepts UG
P2144	Single step synthesis of hydrocarbons from CO ₂ and H ₂ using hybrid catalyst	Kenta SERIKAWA, Takahiro YAMAGUCHI, Yang SONG, Ting MA, Hiroyuki IMAI, Xiaohong LI	The University of Kitakyushu
P2145	Surface-Plasmon-Enhanced Carbon Dioxide Activation and Conversion	Hui SONG, Jinhua YE	Hokkaido University, National Institute for Materials Science (NIMS)
P2146	Synthesis of Ni-Pt alloy carbon catalysts with high metal loading using cation- exchange resin for hydrogen production via formic acid decomposition	Supanat HANPRERAKRIENGKRAI, Hiroyasu FUJITSUKA, Koji NAKAGAWA, Hiroyuki NAKAGAWA, Teruoki TAGO	Tokyo Institute of Technology, Kyoto University
P2147	New insight into the selectivity difference between Co and Ru catalysts for Fischer-Tropsch synthesis and the tuning of product selectivity	Jincan KANG, Xiang YU, Yong YOU, Kang CHENG, Qinghong ZHANG, Ye WANG	Xiamen University
P2148	Homogeneous and highly dispersed Ni-Ru on silica support as an effective CO methanation catalyst	Yi ZHANG, Yi LIU, Wei SHENG, Zhanggui HOU	Beijing University of Chemical Technology, CNOOC Research Institute of Refining and Petrochemicals

P2149	Catalytic upgrading of lignin model compound into transportation fuel by using Ti-MCM-41 mesoporous supported Cu-Ni catalyst	<u>Hwei Voon LEE</u> , Murtala M. AMBURSA, Joon Ching JUAN, Yun Hin TAUFUQ-YAP	University of Malaya, Kebbi State University of Science and Technology Aliero, Universiti Putra Malaysia
P2150	Examining the role of water in the performance of solid oxide fuel cells; an isotopic investigation	<u>Matthew DREWERY</u> , Scott MOLLOY, Bogdan DLUGOGORSKI, Eric KENNEDY, Michael STOCKENHUBER	University of Newcastle, Murdoch University
P2151	The hydrogenation of CO ₂ to methanol over PdZn catalysts	Hasliza BAHRUJI, <u>Robert D. ARMSTRONG</u> , Jonathan RUIZ ESQUIUS, Michael BOWKER, Graham J HUTCHINGS, Wilm JONES, David MORGAN	Cardiff University, The UK Catalysis Hub
P2152	From syngas to electrolyte solutions for Li-ion batteries: Design of green chemical routes	<u>Jianqiang YU</u> , Yan ZHANG, Zhuo LI, Guomin LI, Yan WANG	Qingdao University, Qingdao Research Center of Resource Chemistry and New Materials
P2153	Influence of surface geometry of carbon support for migration and aggregation behavior of Pt nanoparticles during potential cycling conditions	<u>Toshihiro MIYAO</u> , Chinatsu TAKAYAMA, Shohei ASANUMA, Akihiro IYAMA, Hiroyuki UCHIDA	University of Yamanashi
P2154	Bifunctional electrocatalysts based on Fe-Co oxide nanoparticles supported on multiwalled carbon nanotubes for ORR/OER reactions in alkaline media	<u>Mariya A. KAZAKOVA</u> , Karina V. ELUMEEVA, Dulce M. MORALES, Vladimir L. KUZNETSOV, Wolfgang SCHUHMANN	Novosibirsk State University, Boreskov Institute of Catalysis SB RAS, Ruhr-Universität Bochum Universitätsstr.
P2155	CO ₂ hydrogenation to methanol using Cu/CeO ₂ catalysts prepared by a one-step solution combustion method: Influence of copper content	<u>Elisabete M. ASSAF</u> , Marco Aurelio ROSSI, Francielle C. F. MARCOS, Jose M. ASSAF	University of Sao Paulo, Federal University of Sao Carlos
P2156	Effect of Fluoridation on DRIFTS measurements in bimetallic Cu/ZnO-systems for methanol synthesis	<u>Samuel M. FEHR</u> , Mirjam SCHROEDER, Ingo KROSSING	Albert-Ludwigs-University
P2158	Observation of the "Two Sides" of Hydrocarbon Pool Species during Methanol to Hydrocarbons Reaction over HZSM-5 Catalyst	<u>Liang QI</u> , Zhongmin LIU	Dalian Institute of Chemical Physics
P2159	Methanol Steam Reforming and CO ₂ Methanation Using Low Rank Coal Supported Metal Catalysts.	<u>Jiho YOO</u> , Lia PRISCILLA, Paul VICTOR, Yunxia YANG, Hokyung CHOI, Youngjoon RHIM, Sihyun LEE	Korea Institute of Energy Research, CSIRO energy flagship
P2160	Cathode Catalysts of Solid Oxide Electrolysis Cells for Direct Methane Synthesis	<u>Naoya FUJIWARA</u> , Ryuji KIKUCHI, Atsushi TAKAGAKI, S. Ted OYAMA	The University of Tokyo, Virginia Tech
P2161	Kinetic model for Hydrodeoxygenation of Stearic acid over Ni-MoS ₂ Catalyst	<u>Prakhar ARORA</u> , Eva Lind GRENNFELT, Louise OLSSON, Derek CREASER	Chalmers University of Technology, Preem
P2162	Investigation of Activity and Stability towards Oxygen Reduction Reaction of Pt Catalyst with Heteroatom Doped Ordered Mesoporous Carbon Support	<u>BongHO LEE</u> , DoHyung KIM, SeungWoo LEE, JiYeon LEE, YunSeok CHOI	Gwangju Institute of Science and Technology, Sungkyunkwan University
P2163	Investigation of IrRu-based OER Catalysts using Heteroatom doped-Ordered Mesoporous Carbon Supports for Reversal Tolerant Anode of PEMFC	<u>Seung Woo LEE</u> , Do Hyung KIM, Bong Ho LEE, Ji Yeon LEE, Chanho PAK	Gwangju Institute of Science and Technology
P2164	Effect of composition change in the ternary PdIrY alloy on the activity towards oxygen reduction reaction	<u>Do-hyung KIM</u> , Seungwoo LEE, Bongho LEE, Jiyeon LEE, Chanho PAK	Gwangju Institute of Science and Technology
P2165	Theoretical Study of the Local Structure Effect on Methane Reforming Reaction	<u>Shixue LIU</u> , Yosuke KOTANI, Teppei OGURA	Kwansei Gakuin University
P2166	Formic Acid Decomposition for Hydrogen Production over Molybdenum Based Catalyst Supported on Lignin-derived Carbons	<u>Irwan KURNIA</u> , Akihiro YOSHIDA, Abuliti ABUDULA, Guoqing GUAN	Hirosaki University
P2167	By-products accumulation in toluene as a hydrogen carrier during toluene hydrogenation and methylcyclohexane dehydrogenation	<u>Xieli CUI</u> , Ryosuke ATSUMI, Hideyuki MATSUMOTO, Tetsuya NANBA	National Institute of Advanced Industrial Science and Technology
P2168	Effect of reduction temperature and second metal addition to Pd catalysts for formic acid oxidation	<u>Yuki MOTOISHI</u> , Junichiro KUGAI, Satoshi SEINO, Takashi NAKAGAWA, Takao YAMAMOTO	Kobe City College of Technology, Osaka University
P2169	High Performance Electrocatalysts Based on N-doped Carbon Nanotubes	<u>Hui CHAI</u> , Xue JIA	Xinjiang University
P2170	Free fatty acid esterification with methanol catalyzed by Amberlyst BD 20	<u>Chu-Chun CHANG</u> , Wen-Xuan ZHUANG, Kuo-Hao LI, Tai-Shang CHEN, Jia-Ming CHERN	Tatung University
P2171	One pot conversion of glucose to 5- hydroxymethyl furfural using dual functional catalyst	<u>Firdaus PARVEEN</u> , Sreedevi UPADHYAYULA	Indian Institute of Technology Delhi, University of Delhi
P2172	Activity of vanadium sulfide in the slurry phase hydroprocessing of vaccum residue	<u>Donghun LEE</u> , Yong-Kul LEE	Dankook University
P2173	Copper Doped TiO ₂ for H ₂ Production in Ethanol/Water Photoreforming	<u>Wen Ta YANG</u> , Sofia Ya Hsuan LIOU, Tiziano MONTINI, Paolo FORNASIEROB	National Taiwan University, University of Trieste

P2174	A Study of Cobalt-based Fischer-Tropsch Catalyst for the Production of High Calorific Synthetic Natural Gas	Ho Jin CHAE, Soo Chool LEE, Tae Young KIM, Seong Bin JO, Chul Ho LEE, Suk-Hwan KANG, Joon Woo KIM, Jong Min LEE, Jae Chang KIM	Kyungpook National University, Kyungpook National University, Institute for Advanced Engineering (IAE), Research Institute of industrial Science and Technology, Construction Engineering Service Co., LTD
P2175	Morphology effect of nickel phosphide on hydrogen evolution reaction	Hyun-Jung OH, Yong-Kul LEE	Dankook University
P2176	Decomposition of Energetic Ionic Liquid over Pt/Sr-Hexaaluminate Catalyst	Sujeong HEO, Munjeong KIM, Jaegyoo WOO, Dalsan YOO, Young Min JO, Jong Ki JEON	Kongju National University, Kyunghee University
P2177	Electrochemical synthesis of ammonia on Ru-doped perovskite type electrode and its thermal catalytic property ammonia synthesis	Go NAKAGAWA, Nana HIYAMA, Yusuke SATO, Naohiro SHIMODA, Shigeo SATOKAWA	Seikei University
P2178	Kinetic study of triglyceride transesterification with methanol by calcium oxide catalyst	Tai Shang CHEN, Wen Xuan ZHUANG, Jia Ming CHERN	Tatung University
P2179	A First-Principles Study on CO Removing Mechanism on Pt Decorated Oxygen-rich Anode Surfaces (Pt ₂ /o-MO ₂ (110), M = Ru and Ir) in DMFC	Chi-you LIU, Chun-Chih CHANG, Jia-Jen HO, Elise Y. LI	National Taiwan Normal University
P2180	Metallic Fe Nanoparticles Encapsulated into Ordered Mesoporous SiO ₂ for Hydrodeoxygenation of Oleic Acid	Karaked TEDSREE, Rattana THOAKOA	Burapha University
P2181	CO ₂ hydrogenation over Ru supported on Zr-modified χ -Al ₂ O ₃	Kanyanat JEENJUMRUS, Okorn MEKASUWANDUMRONG	Silpakorn University
P2182	Synthesis and characterization of manganese oxides for water oxidation	Florian LESSING, Philipp KURZ, Harald HILLEBRECHT	University Freiburg
P2184	[Mo ₃ S ₁₃] ²⁻ and [Mo ₂ S ₁₂] ²⁻ as active site models for amorphous molybdenum sulphides in HER-catalysis	Marie-Luise GRUTZA, Philipp KURZ	Albert-Ludwigs-University Freiburg, Freiburger Materialforschungszentrum (FMF)
P2185	Anchoring Co/2-methylimidazole complex on ion exchange resin and its transformation to Co/N-doped carbon as an electrocatalyst for oxygen reduction reaction(ORR)	Yexin ZHU, Koji MIYAKE, Yuichiro HIROTA, Yoshiaki UCHIDA, Norikazu NISHIYAMA	Osaka University
P2186	Electrochemical Water Oxidation by MnO _x /CFP: a Volume Catalyst with High Activity over a wide pH range	Jens MELDER, Philipp HEIZMANN, Philipp KURZ	Albert-Ludwigs-University Freiburg
P2187	New insight into the selectivity difference between Co and Ru catalysts for Fischer-Tropsch synthesis and the tuning of product selectivity	Jincan KANG, Xiang YU, Yong YOU, Kang CHENG, Qinghong ZHANG, Ye WANG	Xiamen University
P2188	Effect of acid distribution of B-ZSM-5 on product selectivity in MTP reaction	Subing FAN, Qixin WANG, Junmin LV, Yongqiang CAI, Tiansheng ZHAO	Ningxia University
P2189	Understanding 5-Hydroxymethylfurfural (HMF) Production Derived from Chitosan Using Solid Acids	Prasenjit BHAUMIK, Tai-Wei TZENG, Guo-Chun YANG, Po-Wen CHUNG	Academia Sinica
P2190	Insights into the low temperature activity of gold based catalysts for water gas shift using plasma	Cristina-Elena STERE, Jim ANDERSON, Sarayute CHANSAL, Alex GOGUET, Bill GRAHAM, Chris HARDACRE, Xin TU, Ziyun WANG	The University of Manchester, The University of Aberdeen, The Queen's University of Belfast, The University of Liverpool
P2191	Direct Synthesis of Acetic Acid and Methanol from Greenhouse Gases	Andrew C. CHIEN, Eric Y. LIN, Albert D. LAI	Feng Chia University
P2192	Au@Cu ₂ Se@Shell Nanocrystals for Photoelectrochemical Water Splitting and Photocatalytic Hydrogen Production	Ting-Hsuan LAI, Ken-ichi KATSUMATA, Yung-Jung HSU	National Chiao Tung University, Tokyo University of Science
P2193	Bottom-up design of ORR catalyst using pyridinic nitrogen containing molecules and carbon nanotubes	Moeko FURUKAWA, Riku SHIBUYA, Kotaro TAKEYASU, Junji NAKAMURA	University of Tsukuba
P2194	Preparation of the model electrode catalyst surface composed by nitrogen containing molecules on graphite surface	Takaho AKIMITSU, Riku SHIBUYA, Kotaro TAKEYASU, Takahiro KONDO, Junji NAKAMURA	University of Tsukuba
P2195	Development of reforming catalyst for hydrocarbon over C ₅ in high caloric SNG synthesis process	Joonwoo KIM, Minyoung HWANG, Sukhwan KANG, Dongjun KOH	Research Institute of industrial Science and Technology(RIST), Institute for Advances Engineering (IAE)
P2196	Hydrotalcite-Stabilized MgO-NaNO ₃ with Improved Cyclic Stability for Intermediate-Temperature CO ₂ Capture	Monica Louise T. TRIVINO, Vishwanath HIREMATH, Jeong Gil SEO	Myongji University
P2197	Effects of pH on Au-deposited TiO ₂ for catalytic photoreduction of CO ₂ with H ₂ O	Yasuko Y. MARUO, Yuta NAKAGAWA, Tsubasa KONDOH	Tohoku Institute of Technology
P2198	Iron based monolithic catalysts supported on Al ₂ O ₃ , SiO ₂ , and TiO ₂ :A comparison for NO reduction with propane	Hao ZHOU, MengYao GE, Shiguo WU, Bichao YE, Yaxin SU	Changzhou Institute of Engineering Technology, Donghua University
P2199	Photocatalytic water splitting using Au doped Ti ³⁺ /TiO ₂ hierarchical microspheres for hydrogen production under visible light	Chen-Yi CHOU, He-Yi DU, Ya-Hsuan LIOU, Chin-Jung LIN	National Ilan University, National Taiwan University

P2200	One step synthesis of CoAl- layered double hydroxides electrode and its pseudo-capacitive characteristics	Yi-Yun LEE, Chun TSAO, Chin-Jung LEE	National Ilan University
P2201	Heterogeneous photo-Fenton oxidation for paracetamol removal using iron containing TiO ₂ hollow spheres as Catalyst	Tsung-Han HUANG, Chin-Jung LIN	National Ilan University
P2202	NO _x reduction over Pd/La _{0.9} Ba _{0.1} AlO _{3-δ} at low temperature under exhaust gas condition	Kohei UENO, Takuma HIGO, Shuhei OGO, Satoshi HIROSE, Hitoshi MIKAMI, Yasushi SEKINE	Waseda University, Honda R&D
P2203	In-situ hydrogenation synthesis of Ti ³⁺ self-doped TiO ₂ hollow spheres with enhanced visible light photoactivity	Ho-Yi TU, Chin-Jung LIN, Ya-Hsuan LIOU	National Ilan University, National Taiwan University
P2204	Photocatalytic degradation of methyl orange using commercial TiO ₂ photocatalyst-loaded alginate capsules under ultraviolet light irradiation	Kaito HAYASHI, Takeshi FURUSAWA, Yuya HOSHI, Taki MATSUMOTO, Masahide SATO	Utsunomiya University
P2205	Direct fabrication of Au/ TiO ₂ hollow spheres with enhanced visible light photoactivity	Chih-Ning HO, Chen-Yi CHOU, Chin-Jung LIN	National Ilan University
P2206	Plasmonic enhancement of Au nanoparticle-embedded TiO ₂ hollow spheres for enhanced visible-light photocatalytic activity	Hsiu-Min LIN, Chin-Jung LIN	National Ilan University
P2207	Synthesis of noble metal phosphides for aqueous phase hydrodechlorination	Zhijie WU, Shaohui GE, Yana JU, Tianshu LI, Kai LIU	China University of Petroleum-Beijing, PetroChina Company Limited, Nankai University
P2208	Removal of Hg(II) from desulfurization slurry by EDTA functionalized graphene oxide sheet: synthesis, adsorption mechanism and reproducibility	Jiaying SUN, Changsong ZHOU, Hongmin YANG	Nanjing Normal University
P2209	A highly recoverable photocatalyst synthesized via a biomimetic approach	Jinfeng WANG, Xi LU, Shu HUANG, Xungai WANG	Deakin University, Wuhan Textile University
P2210	A combined experimental and theoretical study on the mechanism of CO-NO reaction over Cr-Cu embedded CeO ₂	Hiroshi YOSHIDA, Taiki HIRAKAWA, Kenichi KOIZUMI, Katsuyuki NOBUSADA, Mauro BOERO, Masato MACHIDA	Kumamoto University, Kyoto University, Institute for Molecular Science, University of Strasbourg and CNRS
P2211	Selective deNO _x catalysts using Pd-based intermetallic compounds supported on Al ₂ O ₃	Jaewan JEON, Shinya FURUKAWA, Kenichi KON, Ken-ichi SHIMIZU	Hokkaido University, Kyoto University
P2212	A first-principles study of CO oxidation on heteroatom-doped penta-graphene	Hsin-Tsung CHEN, Ranganathan KRISHNAN	Chung Yuan Christian University
P2213	Insights into the heterogeneous Hg ⁰ oxidation mechanism over UIO-66 catalyst using experimental and periodic DFT method	Changsong ZHOU, Hongmin YANG	Nanjing Normal University
P2214	Direct decomposition of NO over Au-dispersed NiO/(Y _{0.99} Ba _{0.01}) ₂ O ₃ catalyst	Siman FANG, Lin LIU, Tatsumi ISHIHARA	Kyushu University
P2215	Dependence of morphology, dispersion and hydrodesulfurization performance of active phases in NiMo/SBA-15 on loading method	Pei YUAN	Fuzhou University
P2216	PM combustion of Ag-loaded perovskite-type oxides prepared from heteronuclear cyano-complex precursor	Hiroyuki YAMAURA, Hiroki TAKAHASHI, Makoto FUKUOKA, Syuhei YAMAGUCHI, Hidenori YAHIRO	Ehime University
P2217	Removal of dilute trichloroethylene in air by post-plasma catalysis over Cu-Mn mixed oxides	Zhiping YE, Jean-Marc GIRAUDON, Savita K P VEERAPANDIAN, Nathalie DE GEYTER, Rino MORENT, Jean-Francois LAMONIER	Univ. Lille, Ghent University
P2218	Electrochemical Promotion of Propylene Combustion on Ag Catalytic Coatings	I. KALAITZIDOU, T. CAVOUE, A. BOREAVE, L. BUREL, F. GAILLARD, L. RETAILLEAU-MEVEL, E.A. BARANOVA, M. RIEU, J.P. VIRICELLE, D. HORWAT, P. VERNOUX	University of Lyon, University of Ottawa, Ecole Nationale Supérieure des Mines de Saint-Etienne, University of Lorraine
P2219	Feasibility of application of iron zeolites for high-temperature decomposition of N ₂ O under real conditions of the technology for nitric acid production	Edyta TABOR, Galina SADOVSKA, Milan BERNAUER, Petr SAZAMA, Zdenek SOBALIK	J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences
P2220	Selective reduction of NO with CO and naphthalene in the presence of oxygen on a core-shell CeO ₂ @TiO ₂ supported copper-potassium-based catalyst	Sichem GUERRERO, Naima LOPEZ, Fernanda VENEGAS, Gonzalo AGUILA	Universidad de los Andes, Universidad de Chile, Universidad Andres Bello
P2221	CeO ₂ with different dimensional nanostructures for low temperature catalytic oxidation of toluene	Fangyun HU, Jianjun CHEN, Peng YUE, Shuai LIU, Junhua LI	Tsinghua University
P2222	Jahn-Teller's effect on the redox property of Fe-doped α-MnO ₂ catalyst to oxidize NO	Kezhi LI, Yue PENG, Jianjun CHEN, Rui DUAN, Fangyun HU, Qinchao JING, Junhua LI	Tsinghua University
P2223	The influence of different thermal pretreatments on silica-supported Pt catalysts: particle formation and formaldehyde oxidation mechanism	Hung-Chi WU, Ching-Shiun CHEN	Chang Gung University, Chang Gung Memorial Hospital

P2224	SCR of NO with C ₃ H ₆ over iron modified Ag/Al ₂ O ₃ catalysts supported on honeycomb ceramic	<u>Yaxin SU</u> , Wenyi DENG, Xi YANG	Donghua University
P2225	Copper and Iron functionalized hydroxyapatites as efficient catalysts for several environmental reactions	<u>Antonella GERVASINI</u> , Paolo CARNITI, Sebastiano CAMPISI, Gustavo MARCHETTI, Thierry DELPLANCHE	Universita' degli Studi di Milano, CINDECA, Solvay
P2226	Low temperature regenerating catalytic DPF	<u>Eugenio MELONI</u> , Vincenzo PALMA	University of Salerno
P2227	In situ DRIFT study of biodiesel impurities influence on diesel oxidation catalysts surface adsorption properties	<u>Paola ANGUIA</u> , Jesus Manuel GARCIA-VARGAS, Sonia GIL, Anne GIROIR-FENDLER	CNRS IRCELYON
P2228	Catalytic combustion of light alkanes on Mn multicomponent catalysts	Zauresh ZHEKSENBAEVA, <u>Svetlana TUNGATAROVA</u> , Tokyn BAIZHUMANOVA, Rabiga SARSENOVA, Kaysar KASSYMKAN	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Al-Farabi Kazakh National University

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P3001	Iso-butanol synthesis from syngas over the alkali metals modified Cr/ZnO catalysts	<u>Li TAN</u> , Yoshiharu YONEYAMA, Guohui YANG, Yisheng TAN, Noritatsu TSUBAKI	University of Toyama, Institute of Coal Chemistry
P3003	One-pass Selective Conversion of Syngas to para-Xylene	<u>Guohui YANG</u> , Peipei ZHANG, Li TAN, Yoshiharu YONEYAMA, Noritatsu TSUBAKI	University of Toyama
P3004	PPh ₃ functionalized Rh/rGO catalyst for heterogeneous hydroformylation: Bifunctional reduction of graphene oxide by organic ligand	<u>Yuan FANG</u> , Minghui TAN, Guohui YANG, Yoshiharu YONEYAMA, Noritatsu TSUBAKI	University of Toyama
P3005	A Theoretical Study of Twinning Boundaries of Gold using Evolutionary Algorithms and Reactive Force Field Molecular Dynamics	<u>Ting NIE</u> , Xue-Qing GONG	East China University of Science and Technology
P3006	Cobalt Porphyrin Catalyzed Intramolecular Cyclopropanation of N-Alkyl Indoles/Pyrroles with Alkylcarbene	<u>Annapureddy Rajasekar REDDY</u> , Fei HAO, Kai WU, <u>Cong-Ying ZHOU</u> , Chi-Ming CHE	The HKU Shenzhen Institute of Research & Innovation
P3007	Hierarchical ZSM-12 Nanolayers for Esterification of Ethanol and Levulinic Acid to Ethyl Levulinate	<u>Pannida DUGKHUNTOD</u> , Anawat THIVASASITH, Thittaya YUTTHALEKHA, Chularat WATTANAKIT	Vidyasirimedhi Institute of Science and Technology
P3008	Theoretical insights into structure-reactivity relationship for C-H bond activation on rutile oxides using GBDT algorithm	<u>Chuan ZHOU</u> , HaiFeng WANG, PeiJun HU	East China University of Science and Technology, The Queen's University of Belfast
P3009	Development of heterogeneous-homogeneous hybrid base catalyst	<u>Miyu HAGA</u> , Masazumi TAMURA, Yoshinao NAKAGAWA, Keiichi TOMISHIGE	Tohoku University, JST PRESTO
P3010	Pickering Interfacial Cascade Catalysis of Cyclohexene Epoxide: A Novel and Green Approach for the Synthesis of Dicarboxylic Acids	<u>Marc PERA-TITUS</u> , Bingyu YANG, Loic LECLERCQ, Veronique NARDELLO-RATAJ	Eco-Efficient Products and Process Laboratory (E2P2L), Univ. Lille
P3012	Low temperature hydrogen production by water splitting using redox reaction in electric field	<u>Yutaro KUROSAWA</u> , Kentaro OGINO, Shuhei OGO, Tomohiro YABE, Wakichi KONDO, Kazuhiko KANO, Kunihiro KOJIMA, Yasushi SEKINE	Waseda University, DENSO CORP.
P3013	Synthesis of pharmaceutically relevant terpene amines via one-pot alcohol amination over gold catalysts	<u>Yuliya S. DEMIDOVA</u> , Irina L. SIMAKOVA, Evgeny V. SUSLOV, Evgeny S. MOZHAJCEV, Konstantin P. VOLCHO, Nariman F. SALAKHUTDINOV, Andrey V. SIMAKOV, Dmitry Yu. MURZIN	Boriskov Institute of Catalysis, Novosibirsk State University, Novosibirsk Institute of Organic Chemistry, Universidad Nacional Autonoma de Mexico, Centro de Nanociencias y Nanotecnologia, Process Chemistry Centre, Abo Akademi University
P3014	Defective ZnO-Supported Gold Catalysts: Facilitating CO Oxidation via Vacancy Defects Implantation	<u>Ming-Han LIU</u> , Chung-Yuan MOU, Chia-Min YANG	National Tsing Hua University, National Taiwan University
P3015	<i>In Situ</i> Observation of 2-propanol Dehydration over WO ₃ Catalyst under Microwave Irradiation	<u>Tomoki MATSUZAWA</u> , Shuntaro TSUBAKI, Eiichi SUZUKI, Satoshi FUJII, Yuji WADA	Tokyo Institute of Technology, National Institute of Technology Okinawa College
P3017	Microwave Non-thermal Effect on Water Electrolysis using Planar α -Fe ₂ O ₃ Electrode; Acceleration of Electron Transfer by 2.45 GHz Oscillating Electric Field	<u>Masayuki MATSUHISA</u> , Fuminao KISHIMOTO, Satoshi FUJII, Shuntaro TSUBAKI, Masato. M MAITANI, Eiichi SUZUKI, Yuji WADA	Tokyo Institute of Technology, National Institute of Technology Okinawa College, The University of Tokyo
P3018	Enhanced water oxidation over Ru-polyoxometalate by radio-frequency irradiation	Shuntaro TSUBAKI, Shogo HAYAKAWA, Eiichi SUZUKI, Satoshi FUJII, Tadaharu UEDA, Jie ZHANG, Alan BOND, Yuji WADA	Tokyo Institute of Technology, National Institute of Technology, Okinawa College, Kochi University, Monash University

P3019	Molecular Oxygen Promotes Efficient Hydrogen Production from Formaldehyde Solution Using Ag/MgO Nanocatalyst at Room Temperature	Xiaoqing YAN, Renhong LI	Zhejiang Sci-Tech University
P3020	Lanthanum oxyhydrides as efficient promoters for ammonia synthesis	Kayato OOYA, Keiga FUKUI, Yuki ONO, Masaaki KITANO, Soshi IIMURA, Tomofumi TADA, Hideo HOSONO	Tokyo Institute of Technology
P3021	Interfacial-redox interaction of NO ₃ - and NO ₂ - species over Pt nanoparticles supported on WO ₃ -ZrO ₂ -C	Claudia R. SANTIAGO-RAMIREZ, Arturo MANZO-ROBLEDO, Ricardo MACIAS-SALINAS, Jesus SOTO-HERNANDEZ, Martha L. HERNANDEZ-PICHARDO	Instituto Politecnico Nacional ESIQIE
P3022	Three-way catalysis over self-regenerating Ni-Cu alloy catalysts	Hiroyuki ASAKURA, Tetsuo ONUKI, Saburo HOSOKAWA, Kentaro TERAMURA, Tsunehiro TANAKA	Kyoto University
P3023	Effect of additive component on activity of ceria-based catalysts for soot combustion	Hiroki MUROYAMA, Hiroki ASAJIMA, Toshiaki MATSUI, Koichi EGUCHI	Kyoto University
P3024	The influence of different thermal pretreatments on silica-supported Pt catalysts: particle formation and formaldehyde oxidation mechanism	Hung-Chi WU, Ching-Shiun CHEN	Chang Gung University, Chang Gung Memorial Hospital
P3025	Experimental evidence of SCR NO with NH ₃ mechanism over FeSiBEA, FeAlBEA and Fe(IE)BEA zeolite catalyst	Stanislaw DZWIGAJ, Pawel BORON, Malgorzata RUTKOWSKA, Barbara GIL, Bartosz MARSZALEK, Lucjan CHMIELARZ	Sorbonne Universite, Jagiellonian University
P3026	The influence of the 1,2-dichloroethane hydrodechlorination on the physicochemical properties of bimetallic Ag-Cu loaded BEA zeolite	Stanislaw DZWIGAJ, Izabela KAMINSKA, Sandra CASALE, Dalil BROURI, Christophe CALERS, Anna SREBOWATA	Sorbonne Universite, Institute of Physical Chemistry Polish Academy of Sciences
P3027	Promotion effect of Fe dispersion on the activity of Fe-ZSM-5 for NH ₃ -SCR of NO	Jin SHI, Mingxia CHEN, Zhixiang ZHANG, Wenfeng SHANGGUAN	Shanghai Jiao Tong University
P3028	Dynamic agglomeration and re-dispersion of Cu species in supported catalysts and its influences on their catalytic performances	Fei GAO, Yuan CAO, Lichen LIU, Annai LIU, Lin DONG	Nanjing University
P3029	The confinement by melt infiltration of manganese oxide nanoparticles in SBA-15, a promising route towards efficient catalysts for formaldehyde oxidation	Guillaume ROCHARD, Sebastien ROYER, Jean-Marc GIRAUDON, Jean-Francois LAMONIER	Univ. Lille
P3030	Complete oxidation of formaldehyde over TiO ₂ supported subnanometer Rh catalyst at ambient temperature	Xiucheng SUN, Jian LIN, Lin LI, Xiaodong WANG, Tao ZHANG	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences
P3031	Improvement of N ₂ O decomposition activity over N ₂ O-pretreatment Ce _x Co catalysts: the effects of deposited oxygen species from N ₂ O dissociation	Yanchen YOU, Huazhen CHANG	Renming University of China
P3032	Noble metal exchange of tunnel structured manganese oxides for NO reduction by CO in presence of excess O ₂	Kai GUO, Fei GAO, Lin DONG	Nanjing University, Jiangsu Key Laboratory of Vehicle Emissions Control
P3033	Co ₃ O ₄ morphology and supported catalysts for total oxidation of methylbenzene	Chao WANG, Chuanhui ZHANG, Yanglong GUO, Anne GIROIR-FENDLER	Institute of Materials for Energy and Environment, Research Institute of Industrial Catalysis, Institut de recherches sur la catalyse et l'environnement de Lyon
P3034	Selective catalytic reduction of NO _x with methanol under lean burn condition over transition metal modified zeolite catalysts	Fei HAN, Haijun CHEN	Nankai University
P3035	Remarkably enhanced density and specific activity of active sites in Al-rich Cu-, Fe- and Co-beta zeolites for selective catalytic reduction of NO _x	Galina SADOVSKA, Jaroslava MORAVKOVA, Radim PILAR, Petr SAZAMA	J. Heyrovsky Institute of Physical Chemistry Academy of Sciences of the Czech Republic
P3036	The critical role of oxygen atom adsorption capacity of oxygen vacancies for the ozone decomposition over manganese oxides	Jinzhu MA, Changbin ZHANG, Hong HE	Research Center for Eco-Environmental Sciences, Institute of Urban Environment, University of Chinese Academy of Sciences
P3037	A CeO ₂ /ZrO ₂ -TiO ₂ catalyst for the selective catalytic reduction of NO _x with NH ₃	Wenpo SHAN, Yan ZHANG, Zhihua LIAN, Hong HE	Institute of Urban Environment, Research Center for Eco-Environmental Sciences
P3038	Potassium-Promoted Ag/Al ₂ O ₃ for Catalytic Oxidation of Formaldehyde at Low Temperature	Xueyan CHEN, Min CHEN, Changbin ZHANG, Hong HE	University of Chinese Academy of Sciences, Research Center for Eco-Environmental Sciences, Institute of Urban Environment
P3039	Improvement in potassium and SO ₂ resistance of commercial V ₂ O ₅ -WO ₃ /TiO ₂ SCR DeNO _x catalyst modified with Ce-Cu	Huirong LI, Jifa MIAO, Jinesheng CHEN	Institute of Urban Environment, University of Chinese Academy of Sciences
P3040	Inhibition Effects of Pb on Selective Catalytic Reduction of NO with NH ₃ over Commercial Vanadia-based Catalysts	Jifa MIAO, Huirong LI, Jinxiu WANG, Jinsheng CHEN	Institute of Urban Environment
P3041	The enhancement effect of acid treatment on the Mn ₂ O ₃ catalyst for toluene oxidation	Xiaolin YU, Xueqin YANG, Mengya LIN, Xiuyun MA, Maofa GE	Institute of Chemistry Chinese Academy of Sciences, University of Chinese Academy of Sciences

P3042	Preparation of Pt-Co alloy nanoparticles supported on γ -Al ₂ O ₃ and its application for automotive exhaust purification	<u>Katsutoshi SATO</u> , Akira MIYAZAWA, Ayano ITO, Teppei MACHIDA, Katsutoshi NAGAOKA	Kyoto University, Oita University
P3043	One step synthesis of N-doped activated carbons derived from sustainable microalgae-NaAlg composites for CO ₂ and CH ₄ adsorption	<u>Yaqi WU</u> , Yunpeng XU, Zhongmin LIU	Dalian Institute of Chemical Physics, University of Chinese Academy of Sciences
P3044	Microscopic investigation on the V ₂ O ₅ -WO ₃ /TiO ₂ denitration catalyst with visible variation in color	<u>Jinxiu WANG</u> , Jifa MIAO, Yanting CHEN, Jinsheng CHEN	Institute of Urban Environment, University of Chinese Academy of Sciences
P3045	Individual effects of FAME biodiesel impurities on a diesel oxidation catalyst after full useful life operation in a heavy-duty truck	<u>Jonas GRANESTRAND</u> , Rodrigo SUAREZ PARIS, Ulf NYLEN, Marita NILSSON, Lars J. PETTERSSON	KTH Royal Institute of Technology, Scania CV
P3046	Tuning the low temperature catalytic activity of Cu-SSZ-13 over NO SCR: Control of Al content and acidity	<u>Sung June CHO</u> , Soon Hee PARK, Ha Na JEONG, Kwan-Young LEE, Yun Sung LEE, Young Jin KIM, Chang Hwan KIM	Chonnam National University, Korea University, Hyundai Motor Group
P3047	Design of Ag/silica materials for sorption and catalytic removal of volatile organic compounds	Natalia MIKHEEVA, Anna GORBUNOVA, Elena VISHEGOROTSEVA, Vladimir ZAIKOVSKII, Grigory MAMONTOV	Tomsk State University, Boreskov Institute of Catalysis
P3048	Molten-salt derived titanium dioxide supported ultralow loading platinum catalysts with high catalytic performance for the removal of acetone	Sha LI, Zhiwei WANG, Yuxi LIU, Hongxing DAI, Jiquang DENG	Beijing University of Technology
P3049	Facile synthesis of KFI-type zeolite for NH ₃ -SCR reaction	<u>Jonghyun KIM</u> , Sung June CHO, Do Heui KIM	Seoul National University, Chonnam National University
P3050	The reactivity of "stored NH ₃ " with NO on V ₂ O ₅ /TiO ₂ catalyst in NH ₃ -SCR (Selective catalytic reduction) at low temperature	<u>Inhak SONG</u> , Seunghee YOUN, Hwangho LEE, Se Won JEON, Jeong Woo HAN, Do Heui KIM	Seoul National University, University of Seoul
P3051	Characterization of Pt/TiO ₂ catalyst for NO-CO-H ₂ O reaction	<u>Keisuke KOBAYASHI</u> , Tetsuya NANBA	Yamagata University, AIST
P3052	Modified secondary amine-functionalized adsorbents for CO ₂ capturing process	Jae Wan JEON, <u>Rose Mardie P. PACIA</u> , Seong Won PYO, Young Soo KO	Kongju National University
P3053	Nanoparticles-based catalyst for reducing Pt and Pd by using nanostructured CeO ₂ /ZrO ₂ materials in exhaust treatment	<u>Masakuni OZAWA</u> , Masatomo HATTORI, Takashi HATTORI, Masaki MISAKI, Masaki IWAKAWA	Nagoya University
P3054	Novel low temperature NO _x storage-reduction catalysts for diesel engine emissions	<u>Yan ZHANG</u> , Zhihua LIAN, Yunbo YU, Wenpo SHAN, Hong HE	Institute of Urban Environment, Research Center for Eco-Environmental Sciences
P3055	Synthesis and characterization of Cu-Zn mixed oxide catalysts synthesized by using different precipitants	<u>Sun Gyu LEE</u> , Ye-Sul JEONG, Chae-Ho SHIN	Chungbuk National University
P3056	Promoted NH ₃ -SCR catalytic performance and hydrothermal stability by the addition of tungsten species to CeZrO _x mixed oxides	<u>Jingjing LIU</u> , Xiaoyan SHI, Hong HE	Research Center for Eco-environmental Sciences, Institute of Urban Environment, University of Chinese Academy of Sciences
P3057	Lignin depolymerization using spent catalyst in a batch reactor	Damayanti DAMAYANTI, <u>Ho Shing WU</u>	Yuan Ze university
P3058	Photocatalytic decomposition of low-concentration aqueous ammonia over Pt/TiO ₂	<u>Yao Hsuan TSENG</u> , Shang-Hung CHI	National Taiwan University of Science and Technology
P3059	Selective Catalytic Reduction of NO with C ₂ H ₄ -Effect of Addition of H ₂ or CO to Each Elementary Reaction-	<u>Tatsuya MATSUOKA</u> , Noriyasu OKAZAKI	Kitami Institute of Technology
P3060	Exploring the effects of heat treatments on 2 wt.% Pd-Al ₂ O ₃ for N ₂ O decomposition	<u>Nia RICHARDS</u> , J. Carter, Q. HE, E. NOWICKA, N. F. DUMMER, S. E. GOLUNSKI, G. J. HUTCHINGS	Cardiff Catalysis Institute
P3061	Shape-controlled synthesis of Pd nanocrystals with exposed {110} facets and their catalytic applications	<u>Lingcong LI</u> , Ningqiang ZHANG, Guizhen ZHANG, Hong HE	Beijing University of Technology, Collaborative Innovation Center of Electric Vehicles in Beijing
P3062	Complete oxidation of formaldehyde on Pd/TiO ₂ catalyst at room temperature: the effect of temperature reduction	<u>Yaobin LI</u> , Changbin ZHANG, Hong HE	Institute of Urban Environment, Research Center for Eco-environmental Sciences
P3063	SO ₂ tolerance of the CeO ₂ -TiO ₂ catalyst for selective catalytic reduction of NO _x by NH ₃	Hongtai ZHU, <u>Liyun SONG</u> , Mengqi YIN, Jie CHENG, Yanming SUN, Jian LI, Wenge QIU, Hong HE	Beijing University of Technology
P3064	Mesoporous cobalt oxide-supported palladium catalysts with high performance for o-xylene oxidation	Shaohua XIE, Yuxi LIU, Jiquang DENG, Junji YANG, Xingtian ZHAO, Zhuo HAN, Kunfeng ZHANG, Hongxing DAI	Beijing University of Technology
P3065	Highly active and stable supported palladium-gallium bimetallic catalysts for methane combustion	Zhiqian HOU, <u>Yuxi LIU</u> , Jiquang DENG, Shaohua XIE, Xingtian ZHAO, Kunfeng ZHANG, Zhuo HAN, Jun YANG, Hongxing DAI	Beijing University of Technology

P3066	Hydrogen generation from oxygenated compounds of C1 chemistry for Low- and High-Temperature PEM Fuel Cells	Sukhe D. BADMAEV, Margarita V. KONISHCHEVA, Alexey A. PECHENKIN, Dmitry I. POTEMKIN, Vladimir D. BELYAEV, Pavel V. SNYTNIKOV, Vladimir A. SOBYANIN	EFCOM LLC, Boreskov Institute of Catalysis, Novosibirsk State University
P3067	Preparation and three-way catalytic performance of Ir@Pt/SiO ₂ nanocatalysts with core-shell structure	Gui Zhen ZHANG, Liyun SONG, Hong HE, Jie YU, Wenge QIU	Beijing University of Technology
P3068	Effect of reaction conditions on naphthalene sulfonation	Du-Hyeon KIM, Joonwoo KIM, Dong Jun KOH, Yong-Kul LEE	Dankook University, Research Institute of Industrial Science & Technology
P3069	Space- and time-resolved operando DRIFTS on NSR catalysis: Effects of precious metal and storage component	Jordi AMPURDANES VILANOVA, Hai P. NGUYEN, Atul BANSODE, Atsushi URAKAWA	Barcelona Institute of Science and Technology (BIST), TOYOTA Motor Europe (TME)
P3070	MnO _x -CeO ₂ supported on Cu-SSZ-13: A novel SCR catalyst in a wide temperature range	Qingling LIU, Zhenchao FU, Lei MA, Caixia LIU, Junhua LI, Ziyin ZHANG	Tianjin University, Tsinghua University, Langfang city Beichen Entrepreneurship Resin Materials Company, University of Michigan, Hebei University of Technology
P3071	Study of catalyst performance for the soot oxidation reaction under H ₂ O condition	Chung Sun PARK, Jae Hwan LEE, Eun Jin JEONG, Sung Ho LEE, Kwan-Young LEE	Korea University, Super Ultra Low Energy and Emission Vehicle Center (SULEEV)
P3072	In-situ Probing of the Oxidation/Reduction Dynamics of Pure and Contaminated Pt/Pd/Al ₂ O ₃ DOC Catalysts by XAFS and Flow Reactor Measurements	Susanna L. BERGMAN, Jonas GRANESTRAND, Yonghua DU, Lars J PETTERSSON, Steven L BERNASEK	Yale-NUS College, Princeton University, Royal Institute of Technology (KTH), ICES A*STAR Singapore Synchrotron Light Source
P3073	Theoretical investigation of effects of spin contamination error on DFT calculations for core-shell catalyst models	Kohei TADA, Hiroaki KOGA, Yoshinori ATO, Akihide HAYASHI, Mitsutaka OKUMURA, Shingo TANAKA	National Institute of Advanced Industrial Science and Technology, Kyoto University, Osaka University, ,
P3074	Enhanced removal of Hg (II) ions from desulfurization wastewater by EDTA functionalized graphene oxide complexes	Jiaxing SUN, Heng CHEN, Dongxu QI, Hao WU, Changsong ZHOU, Hongmin YANG	Nanjing Normal University, Engineering Laboratory of Energy System Process Conversion & Emission Reduction Technology of Jiangsu Province
P3075	Support shape effect on the catalytic performance of VO _x /CeO ₂ catalysts for the selective catalytic reduction of NO _x with NH ₃	Tao ZHANG, Huazhen CHANG	Renmin University of China
P3076	Oxygen Vacancies Mediated Complete Visible Light Photocatalytic NO Oxidation over BiOCl	Hao LI, Huan SHANG, Xuemei CAO, Zhihui AI	Central China Normal University
P3077	A mechanism of the formation of polychlorinated organic compounds in the process of 1,2-dichlorobenzene catalytic oxidation	Jie CHENG, Na LI, Xin XING, Zhengping HAO	University of Chinese Academy of Sciences
P3078	Excellent low temperature toluene oxidation over hollow NiCo-MMO derived from LDH @ ZIF-67	Shuang D LI, Dong D WANG, Zhen J WU, Yun F CHEN	Institute of Process Engineering
P3079	Photocatalytic oxidation of aqueous ammonia over titanium dioxide loaded on various supports	Ikko MIKAMI, Satoshi SHIBUYA, Ayame OHSUGI, Mariko ABE	Tokai University
P3080	Coupling System of Ag/BiOBr Photocatalysis and Direct Contact Membrane Distillation for Complete Wastewater Purification	Yuning HUO, Rujing HOU, Zongli XIE, Hexing LI	Shanghai Normal University, CSIRO Manufacturing
P3081	Efficient Water Splitting on Z-scheme Photocatalyst Sheets using Oxysulfides as Hydrogen Evolution Photocatalysts	Song SUN, Takashi HISATOMI, Qian WANG, Shanshan CHEN, Masao KATAYAMA, Tsutomu MINEGISHI, Kazunari DOMEN	The University of Tokyo, National Synchrotron Radiation Laboratory, University of Science and Technology of China
P3082	Bismuth Tantalum Oxyhalogen: A Promising Candidate Photocatalyst for Solar Water Splitting	Xiaoping TAO, Yue ZHAO, Linchao MU, Shengyang WANG, Rengui LI, Can LI	Dalian Institute of Chemical Physics, University of Science and Technology of China, University of Chinese Academy of Sciences
P3083	Highly efficient harvesting and storage of solar energy by photoelectrocatalytic conversion of fast kinetics redox couples on dual-silicon electrodes	Jingying SHI, Shicao LIAO, Can LI	Dalian Institute of Chemical Physics
P3084	Control of hole dynamics in CdS/ZnS core/mesoporous-shell nanorods for enhanced photocatalytic H ₂ evolution under visible light	Zichao LIAN, Masanori SAKAMOTO, Toshiharu TERANISHI	Kyoto University
P3085	Z-scheme overall water splitting on reduced graphene oxide modified Rh/K ₄ Nb ₆ O ₁₇ nanosheets photocatalyst	Hsin-Yu LIN, Jin-Xiong YANG	National Dong Hwa University
P3086	Effects of electron doping with oxygen defect introduction on photocatalytic hydrogen/oxygen evolution activity of non-stoichiometric SrTiO _{3-δ}	Shunta NISHIOKA, Junji HYODO, Junie J. M. VEQUIZO, Shunsuke YAMASHITA, Hiromu KUMAGAI, Koji KIMOTO, Akira YAMAKATA, Yoshihiro YAMAZAKI, Kazuhiko MAEDA	Tokyo Institute of Technology, Kyushu University, Toyota Technical Institute, National Institute for Materials Science
P3087	Spectroscopic insights into the deactivation and regeneration of active species over Co/TiO ₂ in continuous CO ₂ photocatalytic reduction reaction to CH ₄	Marta BORGES, Atsushi URAKAWA	Institute of Chemical Research of Catalonia (ICIQ)

P3088	Band Engineering of Tantalum Nitride Photocatalyst for One-Step Photoexcited Overall Water Splitting	<u>Shanshan CHEN</u> , Tsuyoshi TAKATA, Zhenhua PAN, Takashi HISATOMI, Zheng WANG, Qian WANG, Masao KATAYAMA, Tsutomu MINEGISHI, Taro YAMADA, Kazunari DOMEN	The University of Tokyo, Shinshu University
P3089	One-step microwave-assisted synthesis of mesoporous TiO ₂ hollow spheres and their photocatalytic performance	<u>Chan-Wei CHANG</u> , Chen-Yi CHOU, Chin-Jung LIN	National Ilan University
P3090	Mapping near-field enhanced hot charge separation in plasmonic nanostructure	<u>Yuying GAO</u> , fengtao FAN, Can LI	Dalian Institute of Chemical Physics
P3091	XAS study of Cu species loaded on Bi ₂ O ₃ hierarchical photocatalysts	<u>Hanggara SUDRAJAT</u> , Pornapa SUJARIDWORAKUN	Chulalongkorn University
P3092	Preparation of gallium oxide photocatalysts with various crystalline structures and their Ag loading effects on the carbon dioxide reduction with water	<u>Tomoko YOSHIDA</u> , Yu KAWAGUCHI, Masato AKATSUKA, Muneaki YAMAMOTO, Akiyo OZAWA	Osaka City University, Nagoya University
P3093	Mesoporous Au/TiO ₂ Nanospheres for Green Solvent-Free Visible-Light-Driven Oxidative Coupling Reactions of Amines	<u>Jingling YANG</u> , Chung-Yuan MOU	National Taiwan University
P3094	Photoelectrochemical water oxidation using CuWO ₄ - photoanode prepared by screen-printing method	<u>Vit KALOUSEK</u> , Natsumi MATSUYAMA, Tarun C VAGVALA, Keita IKEUE	Tokyo University of Science-Yamaguchi
P3095	Investigation of low cost metal bipyridyldiamine complexes as co-catalysts for hydrogen evolution from aqueous media	<u>Tarun C VAGVALA</u> , Takashi OYABE, Munetoshi SAKAI, Yusuke FUNASAKO, Vit KALOUSEK, Keita IKEUE	Tokyo University of Science-Yamaguchi
P3096	Application of Pt/TiO ₂ photocatalyst to the treatment of aqueous ammonia-borane for H ₂ production and water purification	<u>Takashi KAMEGAWA</u> , Takayuki NAKAUE	Osaka Prefecture University
P3097	Assembling Ni ²⁺ complexes and silver nanoparticles on γ -Al ₂ O ₃ as visible light photocatalysts for hydrogenolysis of lignin model compounds	<u>pengfei HAN</u> , Sarina SARINA, <u>Huaiyong ZHU</u>	Queensland University of Technology
P3098	Remarkable catalytic activity of brownmillerite-type Ca ₂ FeCoO ₅ for oxygen evolution reaction of water splitting	<u>Etsushi TSUJI</u> , Ryosuke NANBU, Yoshiki DEGAMI, Kei HIRAO, Teruki MOTOHASHI, Yoshitaka AOKI, Hiroki HABAZAKI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University, Hokkaido University, Kanagawa University
P3099	Sunlight-driven Photocatalytic Hydrogen Evolution from Water Using Titanium Phosphorus Oxide	<u>Cheng-Ting LEE</u> , Yu-Chieh SHIH, Ling-I HUNG, Chi-Sheng WU, Sue-Lein WANG	National Taiwan University, National Tsing Hua University
P3100	Synthesis of Ni ₅ P ₄ as cocatalyst for promoting photocatalytic H ₂ production	<u>Zhichao SUN</u> , Yao WANG, Zhiquan YU, Anjie WANG	Dalian University of Technology
P3101	Influence of mid-infrared laser irradiation conditions on CO ₂ photoreduction performance of Au/TiO ₂ catalyst	<u>Tsubasa KONDOH</u> , Yasuko MARUO, Atsushi SATO	Tohoku Institute of Technology
P3102	Synthesis of 2D perovskite oxynitride Li ₂ LaTa ₂ O ₆ N and the photocatalytic performance for CO ₂ reduction	<u>Takayoshi OSHIMA</u> , Kanemichi MURAOKA, Junie Jhon M. VEQUIZO, Sunsuke YAMASHITA, Akira YAMAKATA, Koji KIMOTO, Osamu ISHITANI, Kazuhiko MAEDA	Tokyo Institute of Technology, Japan Society for the Promotion of Science, Toyota Technological Institute, National Institute for Materials Science
P3103	Pt-enhanced mesoporous Ti ³⁺ /TiO ₂ with rapid bulk to surface electron transfer for photocatalytic hydrogen evolution	<u>Guisheng LI</u> , Dieqing ZHANG	Shanghai Normal University
P3104	Enhancement of CO evolution by a Ca modification technique for photocatalytic conversion of CO ₂ by H ₂ O	<u>Rui PANG</u> , Kentaro TERAMURA, Hiroyuki ASAKURA, Saburo HOSOKAWA, Tsunehiro TANAKA	Kyoto University
P3105	Photocatalytic water splitting promoted by Al-doped SrTiO ₃ coloaded with molybdenum oxide and rhodium-chromium oxide	<u>Tzu Hsuan CHIANG</u> , Takashi HISATOMI, Yosuke GOTO, Tsuyoshi TAKATA, Masao KATAYAMA, Tsutomu MINEGISHI, Kazunari DOMEN	National United University, The University of Tokyo
P3106	Optimization of silver-loaded sodium titanate photocatalyst for the reduction of carbon dioxide with water	<u>Xing ZHU</u> , Akihiko ANZAI, Akira YAMAMOTO, Hisao YOSHIDA	Kyoto University
P3107	Copper Nanowires: A Substitute for Noble Metals in Enhancing Photocatalytic H ₂ Generation	<u>Dieqing ZHANG</u>	Shanghai Normal University
P3108	Investigation of catalytic effect of Cr ³⁺ substitution for Fe ₂ O ₃ toward photochemical and electrochemical water oxidation	<u>Tomoki KANAZAWA</u> , Kazuhiko MAEDA	Tokyo Institute of Technology
P3109	Effect of pH value on photocatalytic performance of bismuth vanadate powder synthesized by solvothermal method	<u>Pusit POOKMANEE</u> , Pradudnet KETWONG, Pinit KIDKHUNTHOD, Sukon PHANICHPHANT	Maejo University, Synchrotron Light Research Institute (Public Organization), Chiang Mai University
P3110	Selective cross-coupling between pyridine and cyclohexane through a photoexcitation of pyridine surface complex on titanium oxide	<u>Shimepi NANIWA</u> , Akira YAMAMOTO, Hisao YOSHIDA	Kyoto University

P3111	Oxygen-doped Ta ₃ N ₅ modified with a Ru(II) binuclear complex having the ability to reduce CO ₂ under a wide range of visible light	Kanemichi MURAOKA, Junie Jhon VEQUIZO, Akira YAMAKATA, Osamu ISHITANI, Kazuhiko MAEDA	Tokyo Institute of Technology, Japan Society for the Promotion of Science, Toyota Technological Institute
P3112	The promoting effect of BrO ₃ ⁻ , H ₂ PO ₄ ⁻ and PO ₄ ³⁻ in photocatalytic degradation of methyl orange on TiO ₂	Qingge FENG, Y. Qin SI, Da Chao MA, Wei XU, H. Huang XUAN, Zhen CHEN	Guangxi University
P3113	Strain effects of metal dispersion on crystal phase and photocatalytic activity of TiO ₂	Yoonyoung KIM, Tatsumi ISHIIHARA	Kyushu University
P3114	Synthesis and characterization of single phase FeCrAl oxide photocathode material for photoelectrochemical water splitting	Jeonghun KIM, Ju Hun KIM, Jae Sung LEE	Ulsan national Institute of Science and Technology (UNIST)
P3115	Quantum sized semiconductor for photocatalytic solar fuels production	Songmei SUN, Tatsumi ISHIIHARA	Kyushu University
P3116	Multiple modification of CuW _x Mo _{1-x} O ₄ photoanode for photoelectrochemical water oxidation	Byeong Jun LEE, Youn Jeong JANG, Jin Hyun KIM, Jae Sung LEE	Ulsan National Institute of Science and Technology
P3117	Photocatalytic decomposition of hydrogen iodide on Ta-based oxides for solar hydrogen production	Hidehisa HAGIWARA, Minami SHOMAN, Shintaro IDA, Tatsumi ISHIIHARA	University of Toyama, Kumamoto University, Kyushu University
P3118	Efficient fabrication of active CeO ₂ /g-C ₃ N ₄ photocatalyst for H ₂ evolution under visible light irradiation	Weixin ZOU, Lin DONG	Nanjing university
P3119	Photocatalytic CO ₂ reduction under visible light using carbon nitride and a binuclear Ru(II) complex	Ryo KURIKI, Akira YAMAKATA, Osamu ISHITANI, Kazuhiko MAEDA	Tokyo Institute of Technology, Toyota Technical Institute
P3120	Photocatalytic hydrogen production over ultradispersed Pt/TiO ₂ catalysts	Caroline DESSAL, Lester MARTINEZ, Eric PUZENAT, Pavel AFANASIEV, Franck MORFIN, Jean-Luc ROUSSET, Lluis SOLER, Jordi LLORCA, Laurent PICCOLO	University of Lyon, Technical University of Barcelona
P3121	Photocatalytic properties of perovskite-type oxynitride solid solutions containing niobium	Hideki KATO, Ryosuke AOYAGI, Makoto KOBAYASHI, Masato KAKIHANA	Tohoku University
P3122	Photocatalytic water oxidation using SrTiO ₃ modified with Co ₃ O ₄ under visible light: Effects of SrTiO ₃ support	Megumi OKAZAKI, Tomoki UCHIYAMA, Hideki KATO, Yoshiharu UCHIMOTO, Masato KAKIHANA, Kazuhiko MAEDA	Tokyo Institute of Technology, Kyoto University, Tohoku University
P3123	Solar fuel production: opportunities for nanostructures	Zhigang ZOU, Yingfang YAO, Jianguo LIU, Congping WU	Nanjing University
P3124	Photoelectrochemical CO ₂ reduction using a molecular photocathode prepared by polymerization of Ru(II)-Re(I) metal complexes on the a NiO electrode	Ryutaro KAMATA, Hiromu KUMAGAI, Yasuomi YAMAZAKI, Osamu ISHITANI	Tokyo Institute of Technology
P3125	Titanium nanosheets with highly exposed (001) reactive facets for photocatalytic NO _x abatement in flue gas	Joseph Che-Chin YU, Van-Huy NGUYEN, Janusz LASEK, Jeffrey C. S. WU	National Taiwan University, Lac Hong University, Institute for Chemical Processing of Coal
P3126	Nitrogen/fluorine codoped rutile titanium(IV) oxide as a visible-light-driven photocatalyst for water oxidation	Akinobu MIYOSHI, Yuma KATO, Junie J. M. VEQUIZO, Shunsuke YAMASHITA, Shunsuke NOZAWA, Akira YAMAKATA, Tomoko YOSHIDA, Koji KIMOTO, Kazuhiko MAEDA	Tokyo Institute of Technology, Osaka City University, Toyota Technological Institute, National Institute for Materials Science, High Energy Accelerator Research Organization
P3127	Highly efficient activity for photocatalytic water splitting to produce hydrogen under visible light irradiation over Pd/γ-C ₃ N ₄ catalyst modified by trace Ag	Hai Qin WAN, Xiao Yu WENG, Wei Xin ZOU, Zhao Yi XU, Shou Rong ZHENG, Lin DONG	Nanjing University
P3128	Growth of rod-like Ta ₃ N ₅ single crystal on KTaO ₃ towards visible-light-driven overall water splitting	Zheng WANG, Yasunobu INOUE, Takashi HISATOMI, Tsuyoshi TAKATA, Kazunari DOMEN	Shinshu University, The University of Tokyo, Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPCHEM)
P3130	Development of novel visible-light-driven photocatalysts by Ag(I)- and Cu(I)-substitution in layered perovskite oxides by molten salt treatments	Kenta WATANABE, Akihiko IWASE, Akihiko KUDO	Tokyo University of Science
P3131	Synthesis of brownmillerite Ca ₂ Fe _{2-x} Co _x O ₅ ultrafine particles with nano metric dimension on titanium dioxide surface by reverse micelle method	Ryosuke NANBU, Takeyuki WATANABE, Etsushi TSUJI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University
P3132	Z-schematic CO ₂ reduction utilizing water as the sole electron donor employing visible-light-responsive metal oxides as a CO ₂ -reducing photocatalyst	Aruto KASHIMA, Shunya YOSHINO, Akihiko IWASE, Akihiko KUDO	Tokyo University of Science
P3133	Artificial imitation of one-way electron transfer in natural photosynthesis system by hetero-stacked nanostructure of titanate and tungstate nanosheets position-selectively modified with Pt(terpy) and Ru(bpy) ₃	Fuminao KISHIMOTO, Shuntaro TSUBAKI, Yuji WADA	Tokyo Institute of Technology, Japan Society for the Promotion of Science

P3134	Synthesis of solar Light-driven Photocatalyst for water treatment by using graphene graphene and reduced graphene oxide	<u>YU-TANG LIN</u> , Jeffrey Chi-Sheng WU	National Taiwan University
P3135	Enhancement of photocatalytic activity of tungsten oxide for water splitting by modification with brownmillerite-type Fe-Co oxide	<u>Yoshiki DEGAMI</u> , Etsushi TSUJI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University
P3136	Photocatalytic activity evaluation of granular Pt/TiO ₂ for hydrogen production from glycerol aqueous solution with continuous gas bubbling	<u>Hiroaki SAKURAI</u> , Masato KIUCHI, Tetsuro JIN	National Institute of Advanced Industrial Science and Technology (AIST)
P3137	Water splitting and CO ₂ reduction using Z-scheme system with various metal sulfides as a reducing photocatalyst responding visible light up to 600 nm	<u>Shunya YOSHINO</u> , Akihide IWASE, Akihiko KUDO	Tokyo University of Science
P3138	Photocatalytic water splitting and CO ₂ reduction over Nb- and Ta-containing metal oxide photocatalysts with a laminated structure	<u>Keita NAKAGAWA</u> , Akihide IWASE, Akihiko KUDO	Tokyo University of Science
P3139	CdTe Quantum Dot-Enhanced Titania Systems for Photocatalytic Oxidative NO _x Storage	<u>Merve BALCI</u> , Didem DEDE, Serdar OZCELIK, Hilmi Volkan DEMIR, Emrah OZENSOY	Bilkent University, Izmir Institute of Technology
P3140	Direct synthesis of ethylene glycol by C-C coupling of methanol under visible light	<u>Shunji XIE</u> , Zebin SHEN, Jiao DENG, Pu GUO, Qinghong ZHANG, Haikun ZHANG, Chao MA, Zheng JIANG, Jun CHENG, Dehui DENG, Ye WANG	Xiamen University, Dalian Institute of Chemical Physics, Hunan University, Shanghai Institute of Applied Physics
P3141	Enhanced photocatalytic antifouling efficiency under visible-light by fabrication of composite photocatalysts	<u>Yan ZHANG</u> , Xin ZHANG, Fengkai YU, <u>Jianqiang YU</u> , Jie ZHANG	Qingdao University, Institute of Oceanology, University of Chinese Academy of Sciences
P3142	Enhanced PEC water oxidation performance of hematite with low temperature annealing inducing Sn diffusion	<u>Kyoungwoong KANG</u> , Kwang Young KIM, Jae Sung LEE	Ulsan National Institute of Science and Technology
P3143	Visible-light photoredox catalysis mediated by rationally-designed metal-organic framework photocatalysts	<u>Yu HORIUCHI</u> , Nana UENO, Takashi TOYAO, Masaya MATSUOKA	Osaka Prefecture University, Hokkaido University
P3144	Charge modulation and structural distortion in Ag-decorated sea-urchin-like microspheres TiO ₂ by X-ray absorption spectroscopy	<u>Rui-Yang WU</u> , Chin-Jung LIN, Ya-Hsuan LIOU, Chung-Li DONG, Chung-Li DONG, Chi-Liang CHEN	National Synchrotron Radiation Research Center (NSRRC), National Ilan University, National Taiwan University, Tamkang University
P3145	Novel nanostructurization method using helium plasmas : vanadium and niobium oxides for photocatalysis	<u>Shin KAJITA</u> , Fumiaki MIMURO, Tomoko YOSHIDA, Noriyasu OHNO, Naoaki YOSHIDA	Nagoya University, The Osaka City University, Kyushu University
P3146	Atomically Dispersed Photoelectrocatalysts	<u>Chunhua CUI</u> , Yanbo LI	University of Electronic Science and Technology of China
P3147	Towards understanding nanoscale water electrolysis via photocatalytic overall water splitting	<u>Muhammad QURESHI</u> , Angel T. GARCIA-ESPARZA, Tatsuya SHINAGAWA, Philippe SAUTET, Tanguy LE BAHERS, Kazuhiro TAKANABE	King Abdullah University of Science and Technology , Universite de Lyon, University of California Los Angeles, The University of Tokyo
P3148	Engineering Photocatalytic Reaction Tests in Liquid Media	<u>Bahar IPEK</u> , Deniz UNER	Middle East Technical University
P3149	Experimental and Theoretical Investigation of Hydrogen and Oxygen Production Reactions on Visible-light Responsive MOF Photocatalysts	<u>Shinya MINE</u> , Kenta TATEWAKI, Kenta MIYAHARA, Takashi TOYAO, Yu HORIUCHI, Hidekazu IKENO, Masaya MATSUOKA	Osaka Prefecture University, Hokkaido University
P3150	Preparation of silver-modified TiO ₂ nanotube for removing liquid dyes and gaseous elemental mercury	<u>Cheng-Yen TSAI</u> , Chen-Wuing LIU, Kuen-Song LIN, Yi-Wen LIN, Li-Chi LAI, Hsing-Cheng HSI	National Taiwan University, Yuan Ze University, National Taiwan University
P3151	Diastereoselective semi-hydrogenation of alkynes to <i>cis</i> -alkenes over visible-light responding organically modified titania photocatalyst	<u>Makoto FUKUI</u> , Yuya OMORI, Keiji HASHIMOTO, Atsuhiko TANAKA, Hiroshi KOMINAMI	Kindai University
P3152	A simple solvent-free method for the synthesis of BiOIO ₃ nanoplates as a multifunctional photocatalyst	<u>Yali CAO</u> , Wei JIA, Jing XIE	Xinjiang University
P3153	H ₂ production from methanol on photoirradiated TiO ₂ as studied by electron spin resonance spectroscopy at cryogenic temperature	<u>Jun KUMAGAI</u> , Yasunori UTO, Shimpei NANIWA, Muneaki YAMAMOTO, Hisao YOSHIDA, Tomoko YOSHIDA	Nagoya University, Kyoto University, Osaka City University
P3154	Selective photocatalytic oxidation of aromatic alcohols to aldehydes over Ag-Au/TiO ₂ , Au/TiO ₂ and Cu-Au/TiO ₂ under irradiation of visible light	<u>Atsuhiko TANAKA</u> , Hiroshi KOMINAMI	Kindai University
P3155	Visible Light Driven Z-scheme Water Splitting with Transition Metal Substituted Polyoxometalates as Shuttle Redox Mediators	<u>Osamu TOMITA</u> , Hiroki NAITO, Yukari IWASE, Kohei TSUJI, Akinobu NAKADA, Masanobu HIGASHI, Ryu ABE	Kyoto University, JST-CREST

P3156	Photocatalytic degradation of sulfur mustard over NiO-ZnO/TiO ₂ composites	Nicoleta PETREA, Razvan PETRE, Constantin TOADER, Florentina NEATU, Mihaela FLOREA, Laura E. ABRAMIUC, Cristian M. TEODORESCU, Vasile SOMOGHI, Stefan NEATU	Scientific Research Centre for CBRN Defense and Ecology, National Institute of Materials Physics, SC STIMPEX SA
P3157	Water splitting by photocatalysts with intermetallic compounds Mg _{1-x} Al _x B ₂ as cocatalysts	Kei INUMARU, Yuki NAGATA	Hiroshima University
P3158	Transfer Channel of Photoinduced Hole on TiO ₂ Surface as Revealed by Solid-state NMR and ESR Spectroscopy	Ningdong FENG, Feng DENG	Wuhan Institute of Physics and Mathematics
P3160	Elucidating Charge Transfer at Coating-Stabilized Photocatalyst/Water Interfaces	Zhenhua PAN, Shu HU	Yale University
P3161	Low-Cost Roll-Press Fabricated Particulate Photocatalyst Sheets Based on Metal Substrates for Large-Area Pure-Water Splitting Under Visible Light	Xiong XIAO, Qian WANG, Takashi HISATOMI, Kazunari DOMEN, Tomoaki WATANABE	Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPCHEM), The University of Tokyo, Meiji University
P3162	Synergetic interplay of Zn and Rh-Cr promoters on Ga ₂ O ₃ based photocatalysts for water splitting reaction	Marta BORGES, Atsushi URAKAWA	Institute of Chemical Research of Catalonia (ICIQ)
P3163	Visible-light sensitive photocatalytic activity of iron- and phosphorus-modified TiO ₂ with rutile structure	Tomomi HIRAI, Yosuke HAYASHI, Shinji IWAMOTO	Gunma University
P3164	Influence of loading of brownmillerite-type Ca ₂ FeCoO ₅ on photocatalytic activity of iron oxide for oxygen evolution reaction	Naoya MATSUMOTO, Etusi TUZI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University
P3165	Drastic onset potential shift of Ta ₃ N ₅ photoanode with Mg:GaN modification	Ela NURLAELA, Yutaka SASAKI, Mamiko NAKABAYASHI, Naoya SHIBATA, Taro YAMADA, Kazunari DOMEN	The University of Tokyo, Japan Technological Research Association of Artificial Photosynthetic Chemical Process
P3166	Hydrogen-free Ring Hydrogenation of Aromatic Compounds in Aqueous Suspensions of Rh-loaded TiO ₂ Photocatalyst	Hiroshi KOMINAMI, Kousuke NAKANISHI, Ryosuke YAGI, Kazuya IMAMURA, Atsuhiko TANAKA	Kindai University
P3167	Preparation of Cuprous Oxide Photocathode Using Titanium Microfiber Felt as a Three Dimensional Conductive Substrate	Fumiaki AMANO, Akihito UCHIYAMA, Ayami SHINTANI, Hyosuke MUKOHARA	The University of Kitakyushu, JST PRESTO
P3168	Nitrogen doping into gallium oxide hydroxide for the preparation of visible light response photocatalyst	Yuma KATO, Muneaki YAMAMOTO, Akiyo OZAWA, Tetsuo TANABE, Tomoko YOSHIDA	Osaka City University
P3169	Incorporation of brownmillerite-type Ca ₂ FeCoO ₅ ultrafine particles into macropores of TiO ₂ nanotubular film by electrophoretic method	Kei HIRAO, Etsushi TSUJI, Satoshi SUGANUMA, Naonobu KATADA	Tottori University
P3170	CO ₂ reduction with water over Al ₂ O ₃ -supported Ga ₂ O ₃ photocatalysts	Ryota ITO, Muneaki YAMAMOTO, Akiyo OZAWA, Yuma KATO, Yu KAWAGUCHI, Masato AKATSUKA, Tetsuo TANABE, Tomoko YOSHIDA	Osaka City University, Sakai Chemical Industry, Co., Ltd.
P3171	Effect of excitation energy on the activity for CO ₂ reduction to CO of Ag/Ga ₂ O ₃ photocatalyst	Kokoro YOSHIOKA, Muneaki YAMAMOTO, Yu KAWAGUCHI, Akiyo OZAWA, Yuma KATO, Tetsuo TANABE, Tomoko YOSHIDA	Osaka City University, Sakai Chemical Industry, Co., Ltd.
P3172	The study of structure dependence of Ga ₂ O ₃ in photocatalytic reduction of CO ₂ to CO with H ₂ O over the Ga ₂ O ₃	Masato AKATSUKA, Muneaki YAMAMOTO, Yu KAWAGUCHI, Shinya YAGI, Tomoko YOSHIDA	Osaka City University, Nagoya University
P3173	Enhanced H ₂ evolution on ZnIn ₂ S ₄ Photocatalyst under Visible Light by Surface Modification with Metal Cyanoferrates	Masanobu HIGASHI, Hikaru MATSUOKA, Akinobu NAKADA, Osamu TOMITA, Ryu ABE	Kyoto University, JST-CREST
P3174	Characterization of Ag-incorporation Cu ₂ ZnSnS ₄ thin films as photoabsorbers for photovoltaic and photoelectrochemical water reduction	Shigeru IKEDA, Thi Hiep NGUYEN, Takato KAWAGUCHI, Takashi HARADA, Shuji NAKANISHI, Masanobu HIGASHI, Ryu ABE	Konan University, Osaka University, Kyoto University
P3175	Photocatalytic and photoelectrochemical properties of zirconium-doped bismuth vanadate	Takato KAWAGUCHI, Yui HIGUCHI, Naoto KAWASAKI, Takashi HARADA, Mikas REMEIKA, Muhammad Monirul ISLAM, Takeshi SAKURAI, Shigeru IKEDA	Konan University, Osaka University, Tsukuba University
P3176	Lead Bismuth Oxyhalides PbBiO ₂ X (X = Cl, Br) as Photocatalysts for Water Oxidation Under Visible Light	Hajime SUZUKI, Hironobu KUNIOKU, Masanobu HIGASHI, Osamu TOMITA, Daichi KATO, Akinori SAEKI, Hiroshi KAGEYAMA, Ryu ABE	Osaka University, Kyoto University, JST CREST

P3177	Comparison of base-catalytic activity of MgO prepared by thermal decomposition of hydroxide, basic carbonate, and oxalate	Hiromi MATSUHASHI, Nana ISHIDA, Michiko KITAGAWA	Hokkaido University of Education, RIKEN
P3178	Synthesis of solid acid by supporting WO ₃ or SO ₃ on TiO ₂ -SnO ₂ mixed oxide prepared by a novel method of solid-liquid interface reaction	Kana YOSHIDA, Hiromi MATSUHASHI	Hokkaido University of Education
P3179	Organic-inorganic Aquivion®/silica hybrid solid acid for catalytic etherification and dehydration reactions	Wenhao FANG, Youwei DOU, Shuai ZHOU, Claudio OLDANI, Qiue CAO	Yunnan University, Solvay Specialty Polymers S.p.A.
P3180	Enhanced Conversion and Selectivity from Bio-ethanol to Aromatics over Modified HZSM-5 Zeolite Catalysts	Cheng-Hung LEE, Chun-Yen LIU, Kim Struwe SMITH, Chi-Sheng WU	National Taiwan University, Karlsruhe Institute of Technology
P3181	Selective conversion of glycerol to acrolein on W-based solid acid catalysts	Katsuya ASAZUMA, Hiroki MIURA, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
P3182	Preparation of Brønsted acid gel catalysts with highly hydrophobic surface and their application to acid-catalyzed reactions	Shutaro KAMEYAMA, Hiroki MIURA, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
P3183	Impact of Thermal Activation Conditions on Physicochemical Properties of Nanosheet-derived Mg-Al Mixed Oxides	Rei TANAKA, Isao OGINO, Shuichiroh KUDO, Shin MUKAI	Hokkaido University
P3184	A C-N bond breaking reaction: Esterification of tertiary amides over a reusable CeO ₂ catalyst	Nurnobi Md. RASHED, S. M. A. H. SIDDIKI, Takashi TOYAO, Ken-ichi SHIMIZU	Hokkaido University
P3185	Synthesis of crystalline zirconium phosphate by a minimalistic liquid assisted mechanochemistry-based approach	Yu CHENG, Stephan JAENICKE, Gaik-Khuan CHUAH	National University of Singapore
P3186	Effect of Lanthanides on the product distribution in the hydrogenation of aqueous levulinic acid over modified Ni/TiO ₂ catalysts: Elucidation of reaction mechanism	Ganga Bhavani PEDAASU, Vijay Kumar VELISOJU, Naresh GUTTA, Venugopal AKULA	CSIR - Indian Institute of Chemical Technology
P3187	Base catalytic application of [Nb ₁₀ O ₂₈] ⁶⁻ to CO ₂ fixation: A kinetic and theoretical study	Shun HAYASHI, Seiji YAMAZOE, Kiichiro KOYASU, Tatsuya TSUKUDA	The University of Tokyo, Tokyo Metropolitan University, Kyoto University, JST CREST
P3188	Tuning the acidic properties of Ce-Zr mixed oxide catalysts with different Ce/Zr ratio	Jeong Bae KIM, Eunpyo HONG, Ye-Seul JEONG, Chae-Ho SHIN	Chungbuk National University
P3189	Direct Esterification of Succinic Acid with Phenol using Zeolite Beta Catalyst	Son D. LE, Shun NISHIMURA, Kohki EBITANI	Japan Advanced Institute of Science and Technology
P3190	EPR study of electron-acceptor sites on the surface of solid acid catalysts during catalytic reactions	Alexander F. BEDILO, Ekaterina I. SHUVARAKOVA	Borckov Institute of Catalysis
P3191	CeO ₂ -catalyzed synthesis of 1,3-dialkylureas from amines and CO ₂	Tomokazu SUKEGAWA, Masazumi TAMURA, Kazuki ITO, Yoshinao NAKAGAWA, Keiichi TOMISHIGE,	Tohoku University
P3192	Production of Diethyl Carbonate from Ethylene Carbonate and Ethanol over Supported Fluoro-perovskite Catalysts	Hajime IIDA, Ryuhei KAWAGUCHI, Yuki ISHII, Kazu OKUMURA	Kogakuin University
P3193	Investigation of the catalytic activity for acid reactions over high-dimensional Nb oxide containing fluoride	Satoshi ISHIKAWA, Mai SHINODA, Norihito HIYOSHI, Wataru UEDA	Kanagawa University, National Institute of Advanced Industrial Science and Technology (AIST)
P3194	HNb ₃ O ₈ nanosheet derived from amorphous niobic acid: Effect of layer stacking on the catalytic activity	Jongha PARK, Young-Woong SUH	Hanyang University
P3195	Adjacent acid-base pair sites on silica surface constructed by hydrolysis of pre-anchored amide	Wontae KIM, Loida O. CASALME, Taiki UMEZAWA, Fuyuhiko MATSUDA, Ryoichi OTOMO, Yuichi KAMIYA	Hokkaido University
P3196	Effect of surfactant on morphology, chemical properties and catalyst activity of hydroxyapatite	Saeed HAJIMIRZAEI, Sarayute CHANSAL, Christopher HARDACRE, Craig BANKS, Aidan M. DOYLE	Manchester Metropolitan University, The University of Manchester
P3197	Comparison of Acrylic Acid Production from Lactic Acid and Alkyl Lactates over K ⁺ -exchanged Beta and ZSM-5 Zeolites	Zong Hui LIU, Bo YAN, Bo Qing XU	Tsinghua University
P3198	Regioselective Epoxide Ring Opening with Alcohols Using Heterogeneous Lewis Acid Catalysts	Nicholas A. BRUNELLI, Nitish DESHPANDE, Aamena PARULKAR, Rutuja JOSHI, Brian DIEP	The Ohio State University
P3199	Functionalized metal oxide nanocrystals as a highly acidic heterogeneous catalyst	Jiri KULHAVY, Edman TSANG, Yung-Kang PENG	University of Oxford
P3200	Production of Biodiesel from Triglycerides Transesterification by Alkali Solid Catalysts	Kuo-Hao LI, Yu-Zheng SU, Pi-Hong TSUN, Chun-Jyun WANG, Jia-Ming CHERN	Tatung University
P3201	High temperature fixation of CO ₂ from catalytically plastic pyrolytic furnace	Ching-Tsung YU, Huan-Ting KUO, Chien-Hung CHEN, Han-Wen CHENG, Wen-Hui CHEN	Institute of Nuclear Energy Research

P3202	Catalytic property of hydrogen boride sheets	Asahi FUJINO, Hiroaki NISHINO, Ryota ISHIBIKI, Shin-ichi ITO, Tadahiro FUJITANI, Junji NAKAMURA, Hideo HOSONO, Takahiro KONDO	University of Tsukuba, Tokyo Institute of Technology, National Institute of Advanced Industrial Science and Technology
P3203	The selective oxidation of cinnamyl alcohol to cinnamic acid: A lesson in active site spatial control and process scale-up using Pd- and Pt-catalysts	Lee J DURNDELL, Karen WILSON, Adam F. LEE	Aston University
P3204	Evaluation of silanization of Na-Fe-silicalite-1 and Na-Fe-ZSM-5 on the oxidation of <i>n</i> -octane to C8 oxygenates	Mduduzi N CELE, Holger B FRIEDRICH, Muhammad D BALA	Univeristy of Mpumalanga, University of Kwazulu-Natal
P3205	Oxidative C-C cleavage over vanadium-carbon catalysts	Kosuke HATAKEYAMA, Dai SEKINE, Yoshinao NAKAGAWA, Masazumi TAMURA, Keiichi TOMISHIGE	Tohoku University
P3206	TS-1 Supported Precious Metal Catalysts for the Direct Synthesis of Hydrogen Peroxide	Richard J LEWIS, Kenji UEREA, Yukimasa FUKUTA, Jennifer K EDWARDS, David J MORGAN	Cardiff University, UBE Industries, Lehigh University
P3207	Theoretical investigation for the cause and role of surface oxidation of the nickel oxide / gold core-shell catalysts	Akihide HAYASHI, Yoshinori ATO, Kohei TADA, Hiroaki KOGA, Takashi KAWAKAMI, Shusuke YAMANAKA, Mitsutaka OKUMURA	Osaka University, National institute of advanced industrial science and technology, Kyoto University
P3208	One-pot synthesis of yolk-shell nanoreactors containing molybdenum oxide nanoparticles for epoxidation of olefins	Ryo MATSUMURA, Yasutaka KUWAHARA, Hiroyuki SEKI, Hiromi YAMASHITA	Osaka University, Kyoto University, JXTG Nippon Oil & Energy Corp.
P3209	Gold Nanoparticles on OMS-2-Catalyzed Aerobic Oxidative α,β -Dehydrogenation of β -Heteroatom-Substituted Saturated Ketones	Daichi YOSHII, Xiongjie JIN, Takafumi YATABE, Kazuya YAMAGUCHI, Noritaka MIZUNO	The University of Tokyo
P3210	Selective oxidation of glycerol over Pt/SBA-15 promoted by Bismuth	Shixiang FENG, Kanori TAKAHASHI, Hiroki MIURA, Tetsuya SHISHIDO	Tokyo Metropolitan University, Kyoto University
P3211	Aerobic Oxidation of 5-Hydroxymethylfurfural into 2,5-Furandicarboxylic Acid by Manganese Dioxide	Eri HAYASHI, Keigo KAMATA, Michikazu HARA	Tokyo Institute of Technology, JST-ALCA
P3212	Oxidative conversion of light alkanes on Mo containing catalysts	S.A. TUNGATAROVA, T.S. BAIZHUMANOVA, M. ZHUMABEK, Z.T. ZHEKSENBAEVA, G.N. KAUMENOVA, G.U. BEGIMOVA	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Al-Farabi Kazakh National University
P3213	Unmodified and MgO-modified monolayer V ₂ O ₅ -MoO ₃ /Al ₂ O ₃ catalysts for propane oxidative dehydrogenation	Tamara KHARLAMOVA, Konstantin TIMOFEEV, Valery SVETLICHNYI, Olga VODYANKINA	Tomsk State University
P3214	Selective Catalytic Conversion of Glycerol by Au nanoparticles loaded PTA-functionalized Mesoporous Silica Materials	Yi-tzu LIN, Chih-cheng LIU, Jing-ling YANG, Chung-yuan MOU	National Taiwan University, Academia Sinica
P3215	Oxidative conversion of C3-C4 hydrocarbons to oxygenates over Mo-containing modified catalysts	S.A. TUNGATAROVA, T.S. BAIZHUMANOVA, Z.T. ZHEKSENBAEVA, M. ZHUMABEK	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Al-Farabi Kazakh National University
P3216	Selective Oxidation of Benzene to Phenol by Single Alkali and Alkaline-Earth Metal/Zeolite Catalysts	SHILPI GHOSH, SHANKHA S. ACHARYYA, Yusuke YOSHIDA, Kotaro HIGASHI, Takuma KANEKO, Takehiko SASAKI, Yasuhiro IWASAWA	The University of Electro-Communications, The University of Tokyo
P3217	New routes for the selective C-H hydroxylation of linear <i>n</i> -alkanes with molecular oxygen	Michiel JANSSEN, Lisa VAN EMELLEN, Dirk DE VOS	KU Leuven
P3218	The influence of titanium content on the structure of TS-1 and the activity for the direct hydroxylation of toluene to cresols	Conglin PANG, Guiying LI, Changwei HU	Sichuan University
P3219	Direct conversion of propane to propylene by O ₂ in the presence of HCl over NiO-modified CeO ₂ nanocrystals	Qinghong ZHANG, Quanhua XIE, Huaming ZHANG, Jincan KANG, Jun CHENG, Ye WANG	Xiamen University
P3221	Selective oxidation of propylene glycol over silica-supported iron-molybdenum oxide catalyst	Darya SAVENKO, Natalia Y. VELIEVA, Natalia V. DOROFEEVA, Anna S. SAVEL'EVA, Mikhail A. SALAEV, Valery SVETLICHNYI, Olga V. VODYANKINA	Tomsk State University, Tomsk Polytechnic University
P3222	Chromium oxide supported on Zr modified alumina for stable and selective propane dehydrogenation in oxygen free moving bed process	Seohyun SIM, Sujin GONG, Jongyoon BAE, Hawon PARK, Ashenafi H, Yong-Ki PARK, Ung Gi HONG, Deuk Soo PARK, Won Choon CHOI	Korea Research Institute of Chemical Technology, University of Science & Technology, SK Gas
P3223	Synthesis of vanadium phosphorus oxides enhanced by deep eutectic solvents and its application in selective oxidation of <i>n</i> -butane to maleic anhydride	Bin HE, Ruixia LIU, Suojiang ZHANG	Institute of Process Engineering
P3224	Synthesis of crystalline orthorhombic Mo-V-Cu oxide for selective oxidation of acrolein to acrylic acid	Yudai YAMADA, Satoshi ISHIKAWA, Chuntian QIU, Wataru UEDA	Kanagawa University, Shenzhen University

P3225	An In-Situ FTIR Investigation of the Oxidation of Allyl Alcohol by Titanium Silicalite-1 (TS-1)	<u>Luke HARVEY</u> , Eric KENNEDY, Michael STOCKENHUBER	University of Newcastle
P3226	Promoting effects of Re, Cl and alkali metal on silver catalysts for ethylene epoxidation: A theoretical study	<u>Mikhail A. SALAEV</u> , Olga V. VODYANKINA	Tomsk State University
P3227	Oxidation catalysis of Au nano-particles immobilized on thiol-functionalized mesoporous silicate supports	<u>Toshiaki NOZAWA</u> , Tomoki HAKETA, Jun NAKAZAWA, Shiro HIKICHI	Kanagawa University
P3228	Hydrogen production by partial oxidation of dimethyl ether over noble metal catalysts	<u>Sukhe BADMAEV</u> , Nikita AKHMETOV, Tuyana SHOYNKHOROVA, Vladimir BELYAEV, Vladimir SOBYANIN	Boreskov Institute of Catalysis, Novosibirsk State University
P3229	Study on catalytic oxidative depolymerization of kraft lignin in water with copper-based catalysts	Antonio HERNANDEZ-MANAS, S ZHOU, S ZHOU, Cedric CABRAL-ALMADA, Laurent DJAKOVITCH, Stephane MANGEMATIN, S LIU, <u>Lea VILCOQC</u> , Pascal FONGARLAND	LGPC, IRCELYon
P3230	Gold-palladium supported on titanate nanotubes and the influence of the catalyst preparation method on the catalytic activity for selective oxidation	<u>Motaz KHAWAJI</u> , David CHADWICK	Imperial College London
P3231	The Development of CuI Complexes for Controlled Oxidation of Hydrocarbons by Dioxygen at Room Temperature: Harnessing the Second "O" Atom for Catalytic Turnover	<u>Chih-Cheng LIU</u> , Chen-Hao YEH, Yi-Fang TSAI, Jyh-Chiang JIANG, Chung-Yuan MOU, Steve S.-F. YU, Sunney I. CHAN	Academia Sinica, National Taiwan University of Science and Technology, National Taiwan University
P3232	Thermochemical stability of zeolitic imidazolate frameworks (ZIFs) membrane: Criticality of the membrane/support interface chemistry and its modulation for membrane reactor application.	<u>Seungju LEE</u> , Hyunju LEE, Doohwan LEE	University of Seoul
P3233	Kinetic Modeling of the Direct Amination Reaction of <i>n</i> -Octanol with Ammonia Over a Ag-Co/Al ₂ O ₃ Catalyst	<u>Javier IBANEZ ABAD</u> , Marcia ARAQUE MARIN, Sebastien PAUL, Marc PERA-TITUS	Univ. Lille, Eco-Efficient Products and Process Laboratory (E2P2L)
P3234	Pervaporation assisted esterification in a membrane reactor	Tzu-Ming CHEN, Kuo-Lun TUNG, Kevin C. W. WU, <u>Jeffrey C. S. WU</u>	National Taiwan University
P3235	Direct hydrogen peroxide synthesis - kinetic studies assisted by microreactor technology	<u>Tomoya INOUE</u> , Ming LU, Kenichiro OHTAKI, Hirotada HIRAMA	AIST
P2011	Development of Pd-incorporated perovskite catalyst for various organic reactions	<u>Leo SAPUTRA</u> , Takashi KOJIMA, Takayoshi HARA, Nobuyuki ICHIKUNI, Shogo SHIMAZU	Chiba University
OE311	Highly reducible CeO ₂ nanorods for CO oxidation (Changed from Oral presentation)	<u>Wei XUE</u> , Gang FENG, Zhaoyang TAN, Fang LI, Yanji WANG	Hebei University of Technology