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P01	Synthesis and adsorption properties of nitroso compounds on metal oxides aiming for evaluation of PEFC oxide catalysts	<u>Masaya Kimura,</u> Kenji Hara	Tokyo University of Technology
P02	Multifunctional starch paste assisted synthesis of manganese-cobalt oxide catalyst with multifarious active regions for toluene catalytic combustion	<u>Jinggang Zhao</u> , Peifen Wang, Abuliti Abudulaa, Guoqing Guan	Hirosaki University
P03	Selective catalytic oxidation of acetonitrile on SAPO-34 catalysts embedded with nano-bimetal oxides	Xiangwen Zhang, Haijun Chen	Nankai University
P04	Preparation of CeO ₂ @Beta catalyst for selective catalytic reduction of NOx with NH ₃	<u>Di Mao</u> , Junyan Liu, Jing He, Chengyang Yin	Shenyang Normal University
P05	Room temperature catalytic decomposition of gases ozone over Agbased catalysts	<u>Xiaotong Li</u> , Jinzhu Ma, Xufei Shao, Hong He	Chinese Academy of Sciences
P06	Insight into sintering resistance of Pd/Sr ₃ Ti ₂ O ₇ under the three-way catalyst atmosphere revealed by machine learning enhanced global optimization	Thanh N. Pham, Beatriz A. C. Tan, Yuji Hamamoto, Kouji Inagaki, Ikutaro Hamada, Yoshitada Morikawa	Osaka University
P07	Doped vanadium oxides in tungsten oxides for controlled vanadyl species in NH ₃ -SCR catalyst	Myeung-Jin Lee, Bora Jeong, Hangyu Im, Su-Jin Kim, Woon Gi Kim, Bora Ye, and Hong-Dae Kim	Korea Institute of Industrial Technology
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P09	Preparation of monolithic catalyst for the removal of VOCs	<u>Kaixuan Fu,</u> Yun Su, Lizhe Yang, Rui Han, Qingling Liu	Tianjin University
P10	NH ₃ -SCR over iron-exchanged small- pore zeolites with different framework topologies	Xuechao Tan, Suk Bong Hong	POSTECH

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P12	Interface-enhanced oxygen vacancies of CoCuOx catalysts in situ grown on monolithic Cu foam for VOC catalytic oxidation	<u>Yanfei Zheng</u> , Yun Su, Rui Han, Qingling Liu	Tianjin University
P13	Ab initio thermodynamic background for reoxidation pathways of CuSSZ-13 aatalyst for NH ₃ -SCR of NO	B. Mozgawa, F. Zasada, M. Fedyna, K. Góra-Marek, Ch. Yin, Zh. Zhao, <u>P. Pietrzyk</u> , Z. Sojka	Jagiellonian University
P14	Fine tuning the Pt dispersion on Al ₂ O ₃ and understanding the nature of active Pt sites for CO and NH3 oxidations	Wei Tan, Shaohua Xie, Xing Zhang, Fei Gao, Lin Dong, Fudong Liu	Nanjing University
P15	NO reduction over Rh-based hybrid clustering catalysts	Shinji Endo, Shun Hayashi, Hiroki Miura, Tetsuya Shishido	Tokyo Metropolitan University
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P17	Fe-Mn bimetallic catalyst for simultaneous catalytic elimination of nitrogen oxides and toluene at moderate and low temperature	<u>Beilong Lin</u> , Ziyang Guo, Gaofei Xiao, Minli Fu, Daiqi Ye, Yun Hu	South China University of Technology
P18	Hydrothermally stable zeolite encapsulated metal nanoparticles for cold hydrocarbon emission in gasoline engine after-treatment system	Hidekazu Goto, Ryosuke Abiru, Mayuko Suwa, Shota Urabe, Hiroyasu Fujitsuka, Teruoki Tago	Tokyo Institute of Technology
P19	Facile synthesis of high-stability Pd/MgAl ₂ O ₄ catalyst for methane combustion	<u>Jie Li</u> , Yan Zhang, Wenpo Shan, Hong He	Institute of Urban Environment
P20	Construction of dual active sites on non- vanadium-based oxide catalyst for simultaneous elimination of toluene and nitrogen oxide	<u>Ziyang Guo</u> , Gaofei Xiao, Beilong Lin, Yun Hu, Mingli Fu, Daiqi Ye	South China University of Technology

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P22	Simultaneous abatement of NO and N ₂ O with CH ₄ over Pt,Pd,Rh/TiO ₂ -ZrO ₂ and Pt,Pd,Rh/TiO ₂ -ZrO ₂ -CeO ₂ catalysts	M.C. Campa, G. Fierro, A.M. Doyle, <u>D. Pietrogiacomi</u>	Sapienza University of Rome
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P29	Cu-impregnated MFI zeolites for hydrocarbon trap during cold-start period: Effects of cation ratios in the zeolite support on the hydrothermal stabilities	<u>Jaehee Shim,</u> Jinseng Kim, Jungkyu Choi	Korea University
P30	Surface modification of γ-Al ₂ O ₃ for anti- sintering Pd-based CH ₄ P42_oxidation catalyst	Hyeonwoo Shin, Sang Woo Byun, Jaekyoung Lee, Sung Bong Kang	Gwangju Institute of Science and Technology

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P50	Improving of polymerization rate and tuning of glass transition temperature by alternating terpolymerization of carbon dioxide, propylene oxide and epoxide with adamantyl group	<u>Ko Okuda,</u> Takuya Ebihara, Tomoya Ohkawa, Masayoshi Honda, Hiroshi Sugimoto	Tokyo University of Science

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P57	Synthesis of C2+OH from CO2 hydrogenation reaction using physical mixture of Cu- and Fe-based catalysts	Cássia S. Santana, Luiz H. Vieira, Ananda V. P. Lino, Elisabete M. Assaf, José M. Assaf, <u>Janaina F. Gomes</u>	São Carlos Federal University
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P126	Cyano-embedded graphitic carbon nitride structures doped with boron for efficient photocatalytic oxygen reduction	Hossein Fattahimoghaddam, Tahereh Mahvelati-Shamsabadi, Byeong-Kyu Lee	University of Ulsan
P127	Boron-doping MOF-derived hierarchical manganese iron spinel for highly efficient seawater oxidation	Meng Chen, Nutthaphak Kitiphatpiboon, Abuliti Abudula, Guoqing Guan	Hirosaki University
P128	Stable electrolysis of ammonia on platinum enhanced by methanol in non-aqueous electrolyte for an in-situ hydrogen production	Xue Yang, Han Sun, Chuntong Liu, Haijun Chen	Nankai University
P129	Self-source corrosion of three- dimensional nickel foam induced by iron hydrolysis to prepare high-efficiency electrocatalyst for water oxidation	<u>Zhaolong Wang</u> , Jian Bao, Huaming Li, Hui Xu	Jiangsu University
P130	Efficacious CO ₂ photoconversion to C ₂₊ hydrocarbons using K ₂ Fe ₂ O ₄ /rGO heterojunction as catalysts	Hung-Lin Chen, Fu-Yu Liu, Yu- Yun Lin, Chiing-Chang Chen, Dechun Zou	National Taichung University of Education

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P131	Developing a dual-functional electrocatalyst for sustained seawater electrolysis	Nutthaphak Kitiphatpiboon, Meng Chen, Abuliti Abudula, Guoqing Guan	Hirosaki University
P132	Catalytic desulfurization of liquid fuel via oxidation over ZrO ₂ @nitrogendoped porous carbon, derived from zirconium chloride-loaded metal-azolate framework-6	Md. Mahmudul Hassan Mondol, Sung Hwa Jhung	Kyungpook National University
P133	Acid property of SiO ₂ -Al ₂ O ₃ supported tungsten sulfide catalysts	<u>Takeyuki Nogami</u> , Hiroki Miura, Tetsuya Shishido	Tokyo Metropolitan University
P134	Low-temperature selective EDH over YCrO ₃ perovskite	Kosuke Watanabe, Takuma Higo, Shun Maeda, Hideaki Tsuneki, Kunihide Hashimoto, Yasushi Sekine	Waseda University
P135	Alkaline earth metal cation doping on LaAlO ₃ perovskite catalysts for low-temperature oxidative coupling of methane in an electric field	Harunobu Tedzuka, Yuna Takeno, Shuhei Ogo, Kota Murakami, Takuma Higo, Hideaki Tsuneki, Jeong Gil Seo, Yasushi Sekine	Waseda University
P136	Hydrogen production by steam reforming of liquefied natural gas (LNG) over mesoporous nickel-based catalysts promoted with nonmetal boron	ChangJin Han, Seungwon Park, Do Heui Kim	Seoul National University
P137	Reverse water-gas shift reaction via chemical looping on Co-In2O3	Sota Kakihara, Jun-Ichiro Makiura, Takuma Higo, Naoki Ito, Yuichiro Hirano, Yasushi Sekine	Waseda University
P138	Plastic upcycling to liquid fuels and wax at mild conditions	Achmad Buhori, Chun-Jae Yoo1	Korea Institute of Science and Technology
P139	Development of Ni nanoparticle encapsulated with Silicalite-1 catalyst for high activity steam reforming of bioethanol with coke suppression ability	<u>Sirintra Arayawate</u> , Tsuki Yokosawa, Hiroyasu Fujitsuka, Teruoki Tago	Tokyo Institute of Technology
P140	Catalytic-pyrolysis of plastic wastes in high efficient hydrogen production by MOF-derived NiO/CeO ₂ catalyst	<u>Chang-Yen Hsu</u> , Wei-Ting Chung, Ren-Xuan Yang, Kevin CW. Wu	National Taiwan University

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P141	Plasmonic nanoparticle loaded Al- SrTiO ₃ supported with Rh/Cr ₂ O ₃ and CoOOH cocatalysts for hydrogen production	M. Abd Elkodous, Aziz Aatiqah, Go Kawamura, Wai Kian Tan, Atsunori Matsuda	Toyohashi University of Technology
P142	Practical method for glycolysis of polyethylene terephthalate (PET) over zero-valent zinc (ZVZ)	Yu-Wen Chiao, Weisheng Liao, Kevin CW. Wu	National Taiwan University
P143	Development of facile methods for Pt nanosheet preparation by using staked graphene oxides	Yuki Mido, Tatsuki Nakamae, Sakae Takenaka	Doshisha University
P144	Removal of Cs ⁺ with Zincosilicate zeolites	Yudai Shimizu, Makoto Sano, Takanori Miyake	Kansai University
P145	ZnO nanopagoda arrays as a novel photoanode for photoelectrochemical water splitting	M. M. Abouelela, Go Kawamura, Wai Kian Tan, Atsunori Matsuda	Toyohashi University of Technology
P146	Development of an efficient desulfurization method for aromatic organic sulfur compounds in fuel using ultraviolet light	<u>Taka-Aki Shinozaki</u> , Masahiko Suenaga, Yohan Ko, Eiji Yamamoto, Haruno Murayama, Makoto Tokunaga	Kyushu University
P147	Direct oxidation of methane to methanol by metal-organic framework: influence of the catalyst copper content on methanol productivity	Thielle Nayara Vieira de Souza Ferreira, Janaina Fernandes Gomes, Jose Mansur Assaf	Federal University of São Carlos
P148	Direct methane reforming –Effect of coexisting H ₂ O and CO ₂ –	<u>Rei Satoh</u> , Koichiro Iwama, Noriyasu Okazaki	Kitami Institute of Technology
P149	Steam reforming of methanol using metal-introduced NiCuAl-LDH with chelating agent	<u>Taisei Akagi,</u> Naoki Ikenaga	Kansai University
P150	Direct Methane reforming reaction using biomethane	Sho Fukushima, Koichiro Iwama, Noriyasu Okazaki	Kitami Institute of Technology

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P151	Direct methane reforming reaction - Alumina addition effect in iron oxide catalyst	Yohei Sakurai, Noriyasu Okazak	Kitami Institute of Technology
P152	A comparative analysis of energy performance and process simulation of different hydrogen production methods	Rohit Dalal, Sunit Kumar Singh, Roshan Wathore, Nitin Labhasetwar	CSIR-National Environmental Engineering Research Institute, India
P153	Direct methane reforming -preparation of Fe ₂ O ₃ /Al ₂ O ₃ catalysts-	<u>Koichiro Iwama,</u> Noriyasu Okazaki	Kitami Institute of Technology
P154	Unravelling the structure-activity relationship of Cu-ZnO-Al ₂ O ₃ catalysts relevant to clean hydrogen production via water-gas shift reaction	Seon-Yong Ahn, Won-Jun Jang, Hyun-Seog Roh	Yonsei University
P155	Hydrogen formation from natural methane hydrates collected off tokachi, the pacific ocean	Masaya Arai, Hirotoshi Sakagami, Noriyasu Okazaki, Satoshi Yamashita, Akihiro Hachikubo, Masaaki Konishi, Kazutaka Tateyama, Masato Kida, Hirotsugu Minami	Kitami Institute of Technology
P156	Screening of active metal supported on SiO ₂ for dry reforming of methane (DRM)	Bogyung Kim, Haehyun Min, Sung Bong Kang	Gwangju Institute of Science and Technology
P157	Modulating the metal-support interactions of ceria-supported catalysts for hydrogen production from waste	Kyoung-Jin Kim, Yeol-Lim Lee, Ga-Ram Hong, Hyun-Seog Roh	Yonsei University
P158	Direct conversion of dimethyl ether (DME) to gasoline range hydrocarbons over ZSM-5: Effect of zeolite morphology to product distribution	<u>Mansoor Ali</u> , Faisal Zafar, Jong Wook Bae	Sungkyunkwan University
P159	Colorimetric determination of glucose by SAT-3 using modified CoFe ₂ O ₄ magnetic catalyst	Kurumi Matsui, Hideyuki Katsumata, Mai Furukawa, Ikki Tateishi, Satoshi Kaneco	Mie University
P160	Dynamically shrinkable nanocarrier for Significantly improving the activity of the cocatalysts in Fenton-like reaction	<u>Chun He,</u> Lingzhi Wang, Jinlong Zhang	East China University of Science and Technology

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P161	Transition metal phosphides with dual active sites in Fenton-like system for water treatment	Xiuying Li, <u>Zhu Wang,</u> Zhao-Qing Liu	Guangzhou University
P162	Hydrangea-like NiCo ₂ S ₄ activated peroxymonosulfate for efficient PPCPs degradation: kinetics, intermediates and reaction mechanism	Ziling Zhu, Feng Li, Haidong Yu, Ling Wu	Wuhan University of Science and Technology
P163	Determination of H ₂ O ₂ with PPD oxidation using Ni-CoFe ₂ O ₄	Maiko Shibata, Hideyuki Katsumata, Mai Furukawa, Ikki Tteishi, Satoshi Kaneco	Mie University
P164	Realization of subnano-in-meso architecture with rectification and monovalent ion selectivity for enhanced blue energy conversion	<u>Hoong-Uei Koh</u> , Pei-Ching Tsai, Li-Hsien Yeh, Kevin CW. Wu	National Taiwan University
P165	Degradation of antibiotic by accelerated oxidation method using CoFe ₂ O ₄	Shotarou Kawakami, Hideyuki Katsumata, Mai Furukawa, Ikki Tateishi, Satoshi Kaneco	Mie University
P166	Amorphous aluminosilicates as efficient ion exchangers for ammonium cations from aqueous solutions	M. Takemura, R. Simancas, K. Iyoki, T. Okubo, T. Wakihar	The University of Tokyo
P167	Heterogeneous Cu(III) mediated PMS activation over CuO nanosheets for highly efficient degradation of phenols	Yan Wei, Mingce Long	Shanghai Jiao Tong University
P168	Photocatalytic decolorization of rhodamine B in aqueous solution with CuO/Sn ₃ O ₄ nanocomposite	Ayata Ohnishi, Mai Furukawa, Ikki Tateishi, Hideyuki Katsumata, Satoshi Kaneco	Mie University
P169	Elucidating mechanism of piezoelectrocatalytic degradation of the organic pollutants from aqueous solution	Onkar Sudhir Ekande, Mathava Kumar	Indian Institute of Technology Madras
P170	High-performance capacitive deionization using multi-metal ZIF- derived, N-doped porous carbon with embedded carbon nanotube	<u>Hsi-Yen Wu</u> , Chih-Yu Ma, Chia-Hung Hou, Kevin CW. Wu	National Taiwan University

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P171	Preconcentration of trace heavy metals for determination by graphite furnace atomic absorption spectrometer	<u>Takayuki Fujihara,</u> Mai Furukawa, Hideyuki Katsumata, Ikki Tateishi, Satoshi Kaneko	Mie University
P172	Band gap tuning of g-C ₃ N ₄ /TiO ₂ by vapor phase deposition for enhanced solar photocatalytic degradation of metformin	Sandeep S. Haral, <u>Farhan F.</u> <u>Shaikh</u> , Lekharaj C. Mahajan, Parag Nemade	Institute of Chemical Technology Mumbai
P173	Enhanced photocatalytic NO oxidation performance of TiO ₂ hollow microspheres via introduction of oxygen vacancy	Zhao Hu <u>, Kaining Li,</u> Kangle Lv, Hiromi Yamashita	South-Central Minzu University
P174	Effects of central metals on photochemical water oxidation activities of doubly N-confused hexaphyrin Complexes	<u>Daichi Sugawara,</u> Takashi Nakazono, Tohru Wada	Rikkyo University
P175	Design of plasmonic catalysts using nanostructured materials for hydrogen and carbon cycling	Hiromi Yamashita, Kohsuke Mori, Yasutaka Kuwahara, Tetsutaro Ohmichi	Osaka University

Program of ICEC2022 (Japan Standard Time) August 2nd (Tue) July 30th (Sat) July 31st (Sun) August 1st (Mon) Room C Room C **Room A** Room D Room D Room A Room B Room A Room D Room A Room C Room B Room B 8:00 Registration Registration Registration 9:00 PL-2 PL-3 PL-4 Christopher **Hirohito Junhua** W. Jones Li Hirata 10:00 **Break Break Break KN-10 OB01 OC01** OD01 **OA16 OC18** OD18 **OB33 OC35** OD23 KN-6 KN-1 **Jingguang Hong He** Do Heui Kim OD02 **OC19** OD19 **OB02 OC02 OA17 OB34 OC36** OD24 Chen 11:00 **OB03** OD03 **OB18** OC20 OD20 **OB35 OC37 OD25 OA01** OC03 **OA18 OA33** KN-2 KN-11 OC04 **OC21 OA02** OD04 OA19 OB19 **OD21 OA34 OB36 OC38** Todd J. **Atsushi** OD05 OD22 **OA03 OC05 OA20 OB20** OC22 **OA35 OB37** OC39 Toops Urakawa 12:00 Lunch Lunch Lunch **Special Session** 13:00 Opening KN-7 KN-3 **OB04 OC06** OD06 **OB21 OC23 OA36 OC40** OD26 KN-12 Michael Masaru SIL-01 Jiaguo Yu **OC24** OC41 **OB05 OC07 OD07 OA37** OD27 **OB22** Stockenhuber **Ogura** SIL-02 **OB06** OC08 OD08 **OB23** OC25 **OA38 OB38 OC42** OD28 **OA04 OA21** 14:00 **KN-13 OA05 OB07** OC09 OD09 **OA22 OB24** OC26 **OB39 OC43** OD29 SIL-03 Wonyong **OA06** OD10 **OB25 OC27 OC44** OD30 **OB08 OC10 OA23 OB40** Choi SIL-04 KN-8 **OA07 OB09** OD11 **OA24** OC28 **OA39** OB41 **OC45** KN-4 **KN-14** Kevin C. W. Registration SIL-05 15:00 Yongdan Li Ning Yan OB10 OD12 **OA25 OC29 OA40 OB42 OC46 OA08** Wu **Break Break Break** KN-15 **OA09 OB11** OC11 OD13 **OA26 OB26 OC30 OA41 OB43 OD31** SIL-06 16:00 Anne Giroir-**Opening** OB44 OA10 OB12 **OC12** OD14 **OA27 OB27 OC31 OA42** OD32 Fendler **SIL-07** OA11 **OB13 OC13** OD15 **OA28 OB28** OC32 **OA43 OB45 OC47** OD33 PL-1 SIL-08 KN-9 **KN-16** Christopher **OA12 OB14 OC14 OA29 OB29 OB46 OC48 OD34** KN-5 17:00 Gabriele Jan-Dierk Hardacre **Stefan Marx** SIL-09 **OA13** OB15 **OC15 OA30 OB30 OB47 OC49 OD35** Centi Grunwaldt **OA14 OB16 OC16** OD16 **OA31 OB31 OC33 OA44 OB48** OC50 OD36 SIL-10 **OC17** OD17 **OB32 OC34** OB49 **OC51 OD37 OA15 OB17 OA45 OA32** Closing 18:00 **Break Break Break Short** Short Closing Presentation time including Q&A (min) Plenary resentation Presentation Poster 60 **Poster** Poster Poster 19:00 Keynote 40 P131 - P175 P01 - P40 P41 - P83 P84 - P130 25 20 20 Poster (Room P-1) (Room P-2) (Room P-1) (Room P-2) Invited (Room A) (Room A) Oral 90 Poster n-person only n-person only **Short Presentation**