

Final Scientific Program

World Congress & Expo on

Chemical Engineering & Catalysis

July 23-24, 2018 at Osaka, Japan



Scientific Federation

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Day 1 July 23, 2018

Takasago

08:00-09:00 Registrations

09:00-09:10 Introduction

09:10-09:30 Opening Ceremony

Plenary Forum

09:30-10:20 **Title: Identification and Characterization of Metal-oxide Particles with Energy-resolved Distribution of Electron Traps**

Bunsho OHTANI, Hokkaido University, Japan

Keynote Forum

10:20-11:00 **Title: Catalytic Conversion of Glucose and Industrial-grade Sugars Derived from Corn and Wood into 5-HMF in a Biphasic Continuous-Flow Tubular Reactor**

Chunbao (Charles) Xu, Western University, Canada

Networking & Refreshments Break 11:00-11:15 @ Foyer

11:15-11:55 **Title: Enzyme formulations for biocatalysis in non-aqueous media**

Francesco Secundo, Institute of Chemistry of Molecular Recognition, Italy

11:55-12:35 **Title: Advanced PGM-free catalysts based on graphene for low temperature fuel cells**

María Jesús Lázaro, Instituto de Carboquímica (CSIC), Spain

12:35-13:10 **Title: Catalytic Conversion of Microalgal Oil to Bio-Jet Oil**

Yong K Chang, KAIST, Korea

Lunch Break 13:10-14:00

Invited Talks

Sessions: Molecular and Heterogeneous Catalysis | Photocatalysis | Electrocatalysis and bioelectrocatalysis | Catalytic Materials and Mechanisms | Catalysis for renewable sources | Process Engineering | Biocatalysis | Fluid dynamics | Industrial Chemical Technology

Session Chair: Jyh-Chiang Jiang, National Taiwan University of Science and Technology, Taiwan

Session Co-Chair: MD Monwar Hossain, UAE University, UAE

14:00-14:25 **Title: Highly Active TiO₂-supported Ir Clusters for Steam Reforming of Methane: A Combined Theoretical and Experimental Study**

Jyh-Chiang Jiang, National Taiwan University of Science and Technology, Taiwan

14:25-14:50 **Title: Photo- and thermo-degradation of Volatile Organic Compounds Using Micro-nano-rod Molecular Sieve in a Combined Reactor**

Je-Lueng Shie, National I-Lan University, Taiwan

14:50-15:15 **Title: In situ analysis of water oxidation mechanisms in Ru-based catalysts for artificial photosynthesis**

Yulia Pushkar, Purdue University, USA

15:15-15:40 **Title: Optimization, Integration, and Intensification of Distillation Process for Green and Sustainable Chemical Process**

Moonyong Lee, Yeungnam University, South Korea

15:40-16:05 **Title: Effect of Layered Structure on Gas Barrier Properties of α -C:H / SiOCH / α -C:H Thin Films Synthesized by Atmospheric Pressure Chemical Vapor Deposition**

Tetsuya Suzuki, Keio University, Japan

Networking & Refreshments Break 16:05-16:15 @ Foyer

16:15-16:40 **Title: Nanoporous Silica Aerogel Membranes for CO₂ Capture**

Yi-Feng Lin, Chung Yuan Christian University, Taiwan

16:40-17:05 **Title: Surface phenomena of layered double hydroxide (LDH) and its application for the sorption of borate, phosphorus and arsenic from water and wastewater**

JiaQian Jiang, Glasgow Caledonian University, UK

17:05-17:30 **Title: An Approximate Solution of Reactive Extraction Process in a Hollow-fibre Membrane Contactor: Applied to Metals and Aroma Compounds:**

MD Monwar Hossain, UAE University, UAE

17:30-17:55 **Title: Engineering oxide-based photoelectrodes for solar fuels**

Yan-Gu Lin, National Synchrotron Radiation Research Center, Taiwan

17:55-18:20 **Title: Biopolymer Composites for Catalytic Reduction Processes**

Lee D. Wilson, University of Saskatchewan, Canada

19:00-20:00 Cocktails

Day 2 July 24, 2018

Takasago

Keynote Forum

- 09:30-10:10** **Title: Tuning Energy Bandgap Semiconducting Materials for Energy Conversion and Environment**
Hyoyoung LEE, Sungkyunkwan University, Republic of Korea
- 10:10-10:50** **Title: Computational Studies of Homogeneous, Heterogeneous, and Enzymatic Catalytic Reactions**
Hajime Hirao, City University of Hong Kong, Hong Kong SAR

Invited Talks

Sessions: Chemical Kinetics | Advances in Catalysis | Catalysis and Energy | Environmental Catalysis | Surface and Colloidal Phenomena | Advances in Catalysis Science; Nanomaterials and Nanocomposites; Carbon Nanomaterials

Session Chair: Ming-Wei Chang, Zhejiang University, China

Session Co-Chair: Atsushi Ohtaka, Osaka Institute of Technology, Japan

- 10:50-11:15** **Title: Engineering of Multi-compartment Composite fibers**
Ming-Wei Chang, Zhejiang University, China

Networking & Refreshments Break 11:20-11:30 @ Foyer

- 11:30-11:55** **Title: Reaction Mechanism Unique to Metal Nanoparticles in Hiyama Coupling Reaction in Water**
Atsushi Ohtaka, Osaka Institute of Technology, Japan
- 11:55-12:20** **Title: Preparation of CO₂-Responsive Polymer Nanoparticles**
Yeong-Tarng Shieh, National University of Kaohsiung, Taiwan
- 12:20-12:45** **Title: Magnetron-sputtered bismuth oxide-based low band gap photocatalysts and their potential for water treatment application**
Marina Ratova, Manchester Metropolitan University, UK

12:45-13:00 Panel Discussion

Lunch Break 13:00-14:00

Young Researchers Forum

- 14:00-14:15** **Title: Characteristics of Ca-Modified Iron-Based Oxygen Carriers for Chemical Looping Combustion Process**
HONG, National Taiwan University of Science and Technology, Taiwan
- 14:15-14:30** **Title: Efficient treatment of ammonia in aqueous solution by using UV/H₂O₂ process**
Li-Min Yan, National Taiwan University of Science and Technology, Taiwan
- 14:30-14:45** **Title: Iron-Copper Oxygen Carriers with Al₂O₃ as Support for Chemical Looping Hydrogen Generation**
Jing-You Wu, National Taiwan University of Science and Technology, Taiwan

Featured Talks

- 14:45-15:05** **Title: MOF@IL composite materials as Pd(II) supports for heterogeneous organocatalytic reactions**
Edurne Serrano Larrea, University of the Basque Country (UPV/EHU), Spain
- 15:05-15:25** **Title: Application of bismuth-based semiconductors to cytostatic drugs removal from water**
Ewa M. Siedlecka, University of Gdańsk, Poland
- 15:25-15:45** **Title: Ionizing radiation-induced synthesis of nanomaterials based electro-catalysts on carbon for oxygen reduction reaction (ORR)**
Inna L. Soroka, KTH Royal Institute of Technology, Sweden
- 15:45-16:05** **Title: Supported Fe or Ni catalysts: simple vapor deposition preparation methods and improved catalytic performances**
Xufeng Lin, China University of Petroleum, China

Networking & Refreshments Break 16:05-16:20 @ Foyer

- 16:20-16:40** **Title: Catalytic routes for the production of renewable monomers**
Keiko Yakabi, Cardiff University, UK
- 16:40-17:00** **Title: Separation of Platinum Group Metals (PGM) through Biosorption**
Shafiq Alam, University of Saskatchewan, Canada
- 17:00-17:20** **Title: A Numerical Estimate for the Chemical Kinetics Rate Equation of the Decomposition Effects of Iodine on some Chemical Compounds based on the Euler-Schemes: 'Euler & Modified Numerical Euler Schemes**
ADEWOLE O Mayowa, Atlantic International University, USA

17:20-17:40 **Title: Pillar-layered Metal-Organic Frameworks; Especial Applications in The Catalyses**
Ali Morsali, Tarbiat Modares University, Iran

Poster Presentations on Day 2 JULY 24, 2018

- P-001 Title: Poly(tetrafluoroethylene)-Stabilized Metal Nanoparticles: Preparation and Evaluation of Catalytic Activity for Several Reactions in Water**
Misa Kawase, Osaka Institute of Technology, Japan
- P-002 Title: Oxidative coupling of alkenes with arylboronic acids catalyzed by PS-Rh(III)NPs in Water**
Shiho Fukui, Osaka Institute of Technology, Japan
- P-003 Title: Polyaniline-derived porous carbons: Remarkable adsorbents for the removal of personal care products from water**
Dong Kyu Yoo, Kyungpook National University, Republic of Korea
- P-004 Title: Removal of wide range of pharmaceutical and personal care products from water by adsorption over metal azolate framework-6-derived porous carbon**
Hyung Jun An, Kyungpook National University, Republic of Korea
- P-005 Title: Synthesis of ureas and carbamates by an in situ generation of carbamoyl oximes under metal-free conditions**
Jeh-Jeng Wang, Kaohsiung Medical University, Taiwan
- P-006 Title: Biodegradable Bisvinyl Sulfonemethyl-crosslinked Gelatin Conduit Promotes Regeneration after Peripheral Nerve Injury in Adult Rats**
Yueh-Sheng Chen, China Medical University, Taiwan
- P-007 Title: SiO₂-modified Pt/Al₂O₃ for oxidative dehydrogenation of ethane: a new preparation method for improved catalytic stability, ethylene selectivity**
Yanyan Xi, China University of Petroleum, China
- P-008 Title: Cold-Quenching Synthesis of Bowl-Shaped Graphene Oxide/Fe₃O₄ Composites Modified Au-PCB Electrode for Electrochemical Detection of Dopamine**
Linlin Zhong, Gachon University, Republic of Korea
- P-009 Title: Synthesis of homogeneous core-shell MnO@Cnanowires with excellent electromagnetic wave absorption performance**
Yongli Duan, China University of Petroleum, China
- P-010 Title: Purification and characterization of glutamate decarboxylase by *Lactobacillus brevis* RK03**
Chien-Hui Wu, National Kaohsiung University of Science and Technology, Taiwan
- P-011 Title: Facile synthesis of ultrathin CoS nanosheets and its application in glucose sensing**
Chi Ma, China University of Petroleum, China
- P-012 Title: Synthesis of three-dimensional graphene from petroleum asphalt by chemical vapour deposition**
Zhuchen Liu, China University of Petroleum, China
- P-013 Title: Synthesis of a Dual-stimuli Amphiphilic Block Copolymer via ATRP for Controlled Release Triggered by Upconversion Nanoparticles**
Tzong-Liu Wang, National University of Kaohsiung, Taiwan
- P-014 Title: Medium optimization of Antarctic microorganism cold-adaptive protease**
Jong-il CHOI, Chonnam National University, South Korea
- P-015 Title: Application of high pressure processing on preservation of marlin fillet during storage**
Yi-Chen Lee, National Kaohsiung University of Science and Technology, Taiwan
- P-016 Title: Synthesis and Activity Test on Co-K/ γ -Al₂O₃ Catalyst for Fischer Tropsch Reaction Under Low Temperature Conditions**
Fadhli, Bandung Institute of Technology, Indonesia

Certificate Felicitation @ Closing Ceremony

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2nd World Congress & Expo on

Chemical Engineering & Catalysis

July 25-26, 2019 at Rome, Italy

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