

ICG 2019

4th Edition of
International Conference on

CATALYSIS AND GREEN CHEMISTRY

Theme:

*Catalyzing Inventive Technologies and Estimating
Methodologies to Modernize the approaches in
Catalysis and Green Chemistry*

MAY 13-14, 2019

TOKYO, JAPAN

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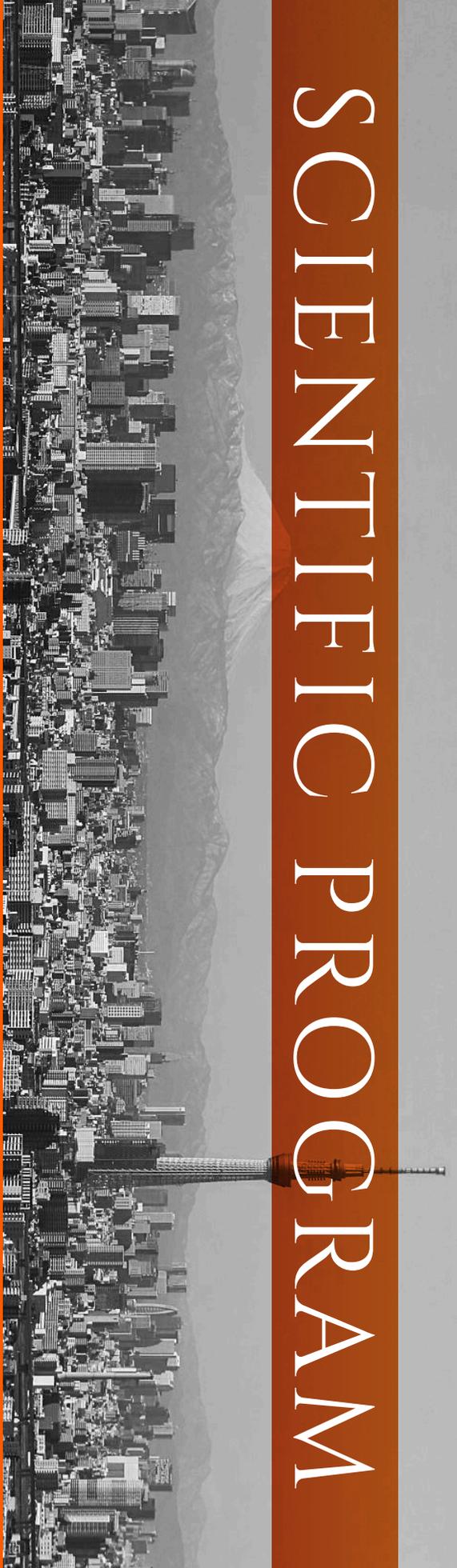


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A vertical grayscale photograph of the Tokyo skyline, showing a dense cluster of skyscrapers and buildings, with the Tokyo Skytree tower visible on the right side. The image is oriented vertically, running from top to bottom.

SCIENTIFIC PROGRAM

ICG-2019

Day 1 May 13, 2019 (Monday) @ Meeting Room 2

08:00-08:40 Registrations

Moderator **Feng Han**, Nanyang Technological University (NTU), Singapore

08:40-09:00 Introduction

Keynote Presentations

09:00-09:40 Title: **Domino reactions. The green and economical art of chemical synthesis**
Lutz F. Tietze, Georg-August-University Göttingen, Germany

09:40-10:20 Title: **Chiral catalysts derived from biomass: Design, synthesis and applications in asymmetric catalysis**
Giang Vo-Thanh, Institute of Molecular Chemistry and Materials in Orsay, France

10:20-11:00 Title: **Catalysts and catalytic processes for converting waste to fungible liquid fuels and chemicals**
Moti Herskowitz, Ben Gurion University at Negev, Israel

GROUP PHOTO

11:00-11:20 **Coffee Break**

@ Foyer

Oral Presentations

Sessions on: **Green Chemistry | Catalysis in Nanotechnology | Synthetic Chemistry Techniques | Chemical Engineering | Photochemistry and Electrochemistry | Analytical Methodologies | Advances in Catalysis and Green Chemistry**

Session Moti Herskowitz, Ben Gurion University at Negev, Israel
Chairs : Giang Vo-Thanh, Institute of Molecular Chemistry and Materials in Orsay, France

11:20-11:40 Title: **Green synthesis and the photothermal effect of transparent chlorophyll thin-films**
Donglu Shi, University of Cincinnati, USA

11:40-12:00 Title: **Carbon deposits in a single catalyst particle as studied by correlated 3-D X-ray microscopy and pore network modeling**
Roosbeh Valadian, Debye Institute for Nanomaterials Science, Netherlands

12:00-12:20 Title: **Techno-economic analysis of coal to liquids based on direct coal liquefaction technology**
Ye Huang, Ulster University, United Kingdom

12:20-12:40 Title: **Cellular automata based simulations for the autocatalytic mechanism in pitting corrosion**
Janusz Stafiej, Cardinal Stefan Wyszyński University, Poland

- 12:40-13:00 Title: An efficient way of producing fuel hydrocarbon from CO₂ and activated water
Tadayuki Imanaka, Ritsumeikan University, Japan
- 13:00-14:00 **Lunch Break** @ Hotel Restaurant
- 14:00-14:20 Title: "Bio-based solvent": New solvent for the synthesis of heterocycles containing oxygen, sulfur and nitrogen
Joana Filomena Campos, Université d'Orléans, France
- 14:20-14:40 Title: DOZN™- A quantitative green chemistry evaluator
Samy Ponnusamy, MilliporeSigma, USA
- 14:40-15:00 Title: How the design of nanomaterials allows to control their properties
Sophie Cassaignon, Sorbonne University, France
- 15:00-15:20 Title: CO oxidation over Au catalysts supported on CuO/Cu₂O both in O₂-rich and H₂-rich streams: Necessity of copper oxide
Caixia Qi, Yantai University, China
- 15:20-15:40 Title: Catalytic options for methane valorization catalyst performance evaluation using parallel fixed bed reactor systems and data driven catalyst development
Rudolf Wessels, Avantium, Netherlands
- 15:40-16:00 Title: A well-defined Fe catalyst system bearing a tetradentate PNNP ligand: Selective synthesis of hydrosiloxanes via dehydronegative coupling of silanols with hydrosilanes
Yumiko Nakajima, National Institute of Advanced Industrial Science and Technology (AIST), Japan
- 16:00-16:20 **Coffee Break** @ Foyer
- 16:20-16:40 Title: Implantable biofuel cell, past, present and future
Abdelkader Zebda, University Grenoble Alpes, France
- 16:40-17:00 Title: Role and significance of molybdenum disulfide (MoS₂) as a cocatalyst for photocatalytic hydrogen production
S.V. Prabhakar Vattikuti, Yeungnam University, Republic of Korea
- 17:00-17:20 Title: Low temperature catalytic oxidations on bimetallic catalysts employing molecular oxygen
Ziyi Zhong, Guangdong Technion Israel Institute of Technology, China
- 17:20-17:40 Title: High-Frequency and Far-Field EPR and Far-Infrared magnetic spectroscopy of transition metal complexes with catalytic properties
Jurek Krzystek, National High Magnetic Field Laboratory, USA
- 17:40-18:00 Title: Multi-walled carbon nanotubes decorated with Cu(II) triazole Schiff base complex and its catalytic performance for adsorptive removal of synthetic dyes
Hoda A. El-Ghamry, Umm Al-Qura University, Saudi Arabia

Day 1 May 13, 2019 (HALL 2) @ Meeting Room 3

Sessions on: Environmental Catalysis | Catalysts and Catalytic Processes | Recent trends in Catalysis and Green Chemistry

Session Chair :	Angelo Vaccari, Università di Bologna, Italy	
11:20-11:40	Title: R&D of New Catalysts for the Water Gas Shift Processes Angelo Vaccari, Università di Bologna, Italy	
11:40-12:00	Title: A green approach for the recovery of proteins from meat industries Abel E. Navarro, Borough of Manhattan Community College, USA	
12:00-12:20	Title: Catalytic hydrogenation of stearic acid to stearyl alcohol over cobalt silica catalysts Zeni Rahmawati, University of Aberdeen, United Kingdom	
12:20-12:40	Title: Adsorption of Zinc Acetate (aqueous solutions) on modified Activated Carbon Hoang Kim Bong, Lomonosov Moscow State University of Fine Chemical Technologies, Russia	
12:40-13:00	Title: The importance of NO _x and CO ₂ on grain and fish production, protection of global warming Shoichiro Ozaki, The Institute of Physical and Chemical Research, Japan	
13:00-14:00	Lunch Break	@ Hotel Restaurant
14:00-14:20	Title: Beneficial effect of glycols on the activity of NiMoP/Al ₂ O ₃ hydrotreating catalysts Evgeniya N. Vlasova, Novosibirsk National Research University, Russia	
14:20-14:40	Title: Reactants-induced dynamic responses of the surface of heterogeneous catalysts monitored by microcalorimetry beyond adsorption Sabine Wrabetz, Fritz Haber Institute of the Max Planck, Germany	
14:40-15:00	Title: Unraveling the controversy over the catalytic reaction mechanism using a new theoretical methodology: One probe and non-equilibrium green's function surface Sang Uck Lee, Hanyang University, Republic of Korea	
15:00-15:20	Title: Description of mass transport through an asymmetric, bio-catalytic membrane reactors Endre Nagy, University of Pannonia, Hungary	
15:20-15:40	Title: Efficient nano-regional photocatalytic heterostructure design via the manipulation of reaction site self-quenching effect Feng Han, Nanyang Technological University (NTU), Singapore	
15:40-16:00	Title: Ru/TiO ₂ CO ₂ methanation catalysts: The decisive role of support crystallinity and stability Capucine Sassoey, Sorbonne Université, France	

- 16:00-16:20 **Coffee Break** @ Foyer
- 16:20-16:40 Title: The most eco-friendly precious metal mining & e-waste processing in the world
Gordon Yu, Taiwan Hsinchu Green Industry Association, Taiwan
- 16:40-17:00 Title: $\text{Cu}_x\text{Ce}_{1-x}\text{O}_2$ nanoflake type catalysts with improved catalytic activity and good thermal stability for diesel soot combustion
Yunquan Liu, Xiamen University, China
- 17:00-17:20 Title: Study of performance for various catalysts for the oxidation of carbon monoxide reaction
Sesha Talpa Sai, Indian Institute of Technology Madras, India
- 17:20-17:40 Title: Fabrication of new types, environmentally-safe fire-protective covers based on fire-extinguishing powders of raw materials
Lali Gurchumelia, Tbilisi State University, Georgia

Video Presentation

Title: A new catalyst for the conversion of aromatics to HC and CO-rich gas
Nicolas Abatzoglou, Université de Sherbrooke, Canada

END OF DAY 1

Day 2 May 14, 2019 (Tuesday) @ Meeting Room 2

Moderator **Rudolf Wessels**, Avantium Chemicals, Netherlands

Keynote Presentations

- 09:00-09:40 Title: Green chemistry in processing of degradable and recycled polymers
Leszek Moscicki, Lublin University of Life Sciences, Poland
- 09:40-10:20 Title: Interlayer dynamics of the active sites of transition metal sulfide-based catalysts and the mechanisms of hydrodesulfurization of oil fractions and synthesis gas conversion into higher alcohols and other oxygenates
Victor Kogan, Russian Academy of Sciences, Russia

Oral Presentations

Sessions on: Catalysis for Energy | Catalysis for Renewable sources | Chemical Kinetics and Catalytic Activity | Petrochemical Engineering | Catalysis and Zeolites | Colloid and Surface aspects | Catalytic Materials | Applications of Catalysis and Green Chemistry in various fields

Session Chairs : Leszek Moscicki, Lublin University of Life Sciences, Poland
Helaja Tuulamari, Vice President at VTT, Finland

- 10:20- 10:40 Title: Adding value to biomass through catalytic transformation
Helaja Tuulamari, Vice President at VTT, Finland

- 10:40- 11:00 Title: Development of Pt catalysts using graphene supports for polymer electrolyte fuel cells
Jian Xie, Indiana University Purdue University Indianapolis, USA
- 11:00-11:20 **Coffee Break** @ Foyer
- 11:20-11:40 Title: Modelling thermokinetics using the Sestak-Berggren equation: A Calcium carbonate case study
Rebecca Gibson, University of Birmingham, United Kingdom
- 11:40-12:00 Title: Thermal utilization of biochar in the process of steam gasification oriented on hydrogen rich gas generation
Adam Smolinski, Central Mining Institute, Poland
- 12:00-12:20 Title: Clean biogas as a renewable economic source of syngas and hydrogen
Angelo Vaccari, Università di Bologna, Italy
- 12:20-12:40 Title: Photocatalytic production of hydrogen from biomass or wastewaters using solar energy
Alberto V. Puga, Instituto de Tecnología Química, Spain
- 12:40-13:00 Title: Key factors for the design of active iron-based oxygen evolution catalysts
Toshihiro Takashima, University of Yamanashi, Japan
- 13:00-14:00 **Lunch Break** @ Hotel Restaurant
- 14:00-14:20 Title: Competitive reactions in hydrogenation of aqueous acetic acid by Flow-type reactor with Ni-Sn/TiO₂ catalyst for bioethanol production
Yuanyuan Zhao, Kyoto University, Japan
- 14:20-14:40 Title: Percolation and additional active centers as key factors for performance of highly productive Fischer-Tropsch synthesis catalysts
Vladimir Z. Mordkovich, Technological Institute for Superhard and Novel Carbon Materials, Russia
- 14:40-15:00 Title: Scale-up of an integrated formic acid-to-power system
Tim Wissink, TU Eindhoven, DENIS, Netherlands
- 15:00-15:20 Title: Development of auto-thermal catalytic reforming of tars and hydrocarbon gases derived from pressurized fluidized-bed gasification of wood residues
Ilkka Hiltunen, VTT Technical Research Centre of Finland Ltd, Finland
- 15:20-15:40 Title: Zeolites: Potential soil amendments for improving agriculture productivity
Vijay Sandeep Jakkula, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India
- 15:40-16:00 **Coffee Break** @ Foyer
- 16:00-16:20 Title: Preparation of DNA crown cells (artificial cells) using eggs and sphingosine-DNA
Shoshi Inooka, President of the Japan Academy of Applied Cell Biology, Japan
- 16:20-16:40 Title: Selective Palladium-catalyzed Synthesis of Diesters: Alkoxy-carbonylation of a CO₂-butadiene derived lactone
Muhammad Sharif, Kingdom of Saudi Arabia, Saudi Arabia

- 16:40-17:00 Title: The morphology and surface modification effect on the properties of OER
Chuanbao Cao, Beijing Institute of Technology, China
- 17:00-17:20 Title: Valorization of household waste in hydroponics
Hannachi Abdelhakim, University of Skikda, Algeria
- 17:20-17:40 Title: Preparation for magnetic photocatalysts composites in visible light photocatalytic degradation of sulphonamide wastewater
Huanling Xie, Chongqing University of Technology, China

End Note

Poster Presentations (16:00- 17:00) @ Hallway area

- ICGPP- 001 Title: Oscillatory behavior in a cellular automaton based model of metal passivation
Janusz Stafiej, Cardinal Stefan Wyszyński University, Poland
- ICGPP- 002 Title: Photochemical and thermal reactivity of bipyridyl-functionalized hydrazones and their ON / OFF functionality
Pavol Tisovský, Comenius University, Slovakia
- ICGPP- 003 Title: Synthesis of Comb type fluorine containing siloxane polymers and solid polymer electrolyte membranes on their basis
Tamar Tatrishvili, Ivane Javakishvili Tbilisi State University, Georgia
- ICGPP- 004 Title: Ruthenium based multimetallic nanoparticles: Probe the local structure
Capucine Sassoie, Sorbonne Université, France
- ICGPP- 005 Title: Development of technology for production of new types fire-extinguishing powders and foam-suspensions
Lasha Tkemaladze, Tsulukidze Mining Institute, Georgia
- ICGPP- 006 Title: Selective ionic flow cells (SIFC) an alternative to treat wastewater and reduce climate change
Juan Jose Lozada Castro, Universidad de Nariño, Colombia
- ICGPP- 007 Title: Integrated two stage processing of biomass conversion to HMF esters using ionic liquid as green solvent and catalyst: Synthesis of mono esters
Komal Kumar, Indian Institute of Technology Delhi, India
- ICGPP- 008 Title: Synthetic, Biological evaluation of Bis Tetrathiomolybdate compounds of Pt,Pd and Ni Ions
V.K. Srivastava, Chemical Research Laboratory, India
- ICGPP- 009 Title: New fluorine containing solid polymer electrolyte membranes
Eliza Markarashvili, Ivane Javakishvili Tbilisi State University, Georgia
- ICGPP- 010 Title: Electrocatalytic enhancement of oxalic acid oxidation using platinum/carbon black-nickel-reduced graphene oxide on screen-printed carbon electrode
Kamolwich Income, King Mongkut's University of Technology Thonburi, Thailand

- ICGPP- 011 Title: Synthesis and characterization of Tetranuclear Palladium complexes of abnormal N-heterocyclic carbene ligands and their catalytic application in C–C coupling
Yong-Siang Su, National Changhua University of Education, Taiwan
- ICGPP- 012 Title: Enantioselective [4 + 2]-annulation of oxadienes and allenones catalyzed by an amino acid derived phosphine: Synthesis of functionalized dihydropyrans
Nisar Ullah, King Fahd University of Petroleum & Minerals, Saudi Arabia
- ICGPP- 013 Title: Carbon nanodots for Mercury Ions Detection
Benjawan Ninwong, King Mongkut's University of Technology Thonburi, Thailand
- ICGPP- 014 Title: Synthesis, characterization and catalytic applications of Au@Pd heteroparticles
Muhammad Nawaz Tahir, King Fahd University of Petroleum and Minerals, Saudi Arabia

E-Poster Presentations

- ICGEP- 001 Title: The use of aerosol nanocatalysis technology is one of the new directions of industrial development
Glikina M. Iryna, Volodymyr Dahl East-Ukrainian National University, Ukraine
- ICGEP- 002 Title: Whole-cell bioconversion of naringenin using *Yarrowia lipolytica* 2.2ab in surface and liquid cultures
Sergio Huerta-Ochoa, Universidad Autonoma Metropolitana Campus Iztapalapa, Mexico
- ICGEP- 003 Title: Copper-benzotriazole based coordination polymer as catalyst towards the one-pot synthesis of N'-substituted-hydrazo-1,4-dihydropyridines
Michael G. Kallitsakis, Aristotle University of Thessaloniki, Greece
- ICGEP- 004 Title: Synthesis and features of formation of hydrated oxides at the nanoscale level
Olga V. Artamonova, Voronezh state technical university, Russia
- ICGEP- 005 Title: On thermodynamics & experimental evidences of the Kurdjumov and spillover effects in carbon nanostructures, under self-intercalation of high density hydrogen
Yury S. Nechaev, Bardin Central Research Institute for Ferrous Metallurgy, Russia
- ICGEP- 006 Title: Effect of doping on Physicochemical characteristics of lead titanate and of barium titanate
Mrharrab Lamiae, Ibn Zohr University, Morocco
- ICGEP- 007 Title: Synthesis of derivatives of 4-hydroxymethylisoindolinium chlorides and their intramolecular recyclization
Chukhajian Emma H, The scientific technological centre of organic and pharmaceutical chemistry of national academy of sciences of the Republic of Armenia, Armenia
- ICGEP- 008 Title: Loading metal phthalocyanine on modified graphene oxide for photocatalytic effect
Melika Ghaeini, Guilan University, Iran
- ICGEP- 009 Title: Deep sleep simulation
Tetyana Vdovenkova, T.V.A, Canada
- ICGEP- 010 Title: Novel study on the effect of TiO₂ nanosol addition on properties of Iraqi engine oil
Alwan Nsaif Jassim, Iraqi Ministry of Industry and Minerals, Iraq
- ICGEP- 011 Title: Problems of the pollution in transboundary rivers basin of the aral sea and the ways of their solution
Chembarisov E.I, Scientific Research Institute of Irrigation and Water Problems, Uzbekistan
- ICGEP- 012 Title: Potential use of algae from red sea in bioremediation
Suleiman Bifari, Jubail research and Innovation ClusterHUB, Saudi Arabia

****NOTES****

ICG-2019

*We wish to meet you again at our other
Magnus Catalysis Events*

Catalysis, Chemical Engineering and Technology

September 16-18, 2019 | London, UK

www.catalysisevents.com

Email: catalysis@magnus-group.org

Catalysis and Chemical Science

February 10-12, 2020 | Baltimore, USA

www.catalysiscongress.com

Email: chemicalscience@magnusscigroup.com

Catalysis and Green Chemistry

May 18-19, 2020 | Osaka, Japan

www.catalysis-conferences.com

Email: greenchemistry@magnusmeetings.com



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