



**SCIENTIFIC
COLLOQUIUM**
EXPLORING THE RESEARCH

Scientific Program

International Conference on

Material Science and Engineering & Artificial Intelligence and Machine Learning

August 19-20, 2019 | Courtyard by Marriott Shin-Osaka Station, Osaka, Japan



Scientific Colloquium

H5, Ash Tree Court, Nottingham Business Park, Nottingham, NG8 6PY, England

Day 1 Aug 19, 2019 @ Room A & B

- 08:30-09:00 Registrations
09:00-09:10 Introduction
09:10-09:30 Opening Ceremony

Keynote Session

- 09:30-10:00 **Title: Exploring Novel Facets of Metal Oxide Nanomaterials and Their Applications**
Yoshitake Masuda, National Institute of Advanced Industrial Science and Technology (AIST), Japan
- 10:00 - 10:30 **Title: Cellulose-nanofibrils/carbon-nanotubes (CNF/CNT), CNF/graphene and CNF/CNT/graphene: novel organic/inorganic hybridized nanostructures and their typical applications**
Bunshi Fugetsu, The University of Tokyo, Tokyo

Panel Discussion

- 10:30 - 10:45 Coffee Break

Plenary Session

- 10:45 - 11:30 **Title: Exploration and Ion-Diffusion Mechanism of New Structure-Type Ion Conductors**
Masatomo Yashima, Tokyo Institute of Technology, Japan

Invited talks

Session Chair : Philippe M. Heynderickx, Ghent University Global Campus, South Korea

Session Co-chair : Ken Hattori, Nara Institute of Science and Technology, Japan

- 11:30 - 11:55 **Title: Creation and observation of atomically flat side-surfaces of three-dimensionally fabricated nanostructures on Si substrates**
Ken Hattori, Nara Institute of Science and Technology, Japan
- 11:55 - 12:20 **Title: Synthesis of hierarchical porous organic polymers (POP) for visible light and natural sunlight induced rapid degradation of azo, thiazine and fluorescein based dyes**
Philippe M. Heynderickx, Ghent University Global Campus, South Korea

Group Photo

Panel Discussion

- 12:20 - 13:00 Lunch Break

- 13:00 - 13:25 **Title: Control of Molecular Orientation in Polypropylene using Specific Nucleating Agent**
Panitha (Phulkerd) Enta, Japan Advanced Institute of Science and Technology, Japan
- 13:25 - 13:50 **Title: Preparation of heterogeneous β -FeSi₂/Si composites synthesized by eutectoid decomposition and their thermoelectric properties**
Mikio Ito, Osaka University, Japan

- 13:50 - 14:15** **Title: Characterization of delamination occurrence in carbon fiber reinforced plastic laminates with microscale strain distributions**
Qinghua Wang National Institute of Advanced Industrial Science and Technology, Japan
- 14:15 - 14:40** **Title: Tin Oxide Nanosheets Thin Film Gas Sensor for Human Stress Management**
Pil Gyu Choi, National Institute of Advanced Industrial Science and Technology, Japan
- 14:40 - 15:05** **Title: Fullerene (C60) derivatives and their Composites toward Highly efficient Lithium Storage**
Hsing-Lin Wang, Southern University of Science and Technology, China
- 15:05 - 15:30** **Title: Mechanistic Study on the Allylic Arylation in Water with Metal Nanoparticles**
Atsushi Ohtaka , Osaka Institute of Technology, Japan

15:30 - 15:45 Coffee Break

Young Researchers Forum

- 15:45 - 16:00** **Title: Dual Drug-Loaded Poly-D,L-Lactide(PDLLA)/Chitosan(CS) Electrospun Composite Membrane for Periodontal Regeneration**
Kuan-Yu Huang, National Taiwan University of Science and Technology, Taiwan
- 16:00 - 16:15** **Title: To Control the Mechanical Strength of Photo-Resin for 3D printing of flexible photopolymer for biomaterials engineering**
Yu-Chun,Wang, National Taiwan University of Science and Technology, Taiwan
- 16:15 - 16:30** **Title: One-Step Synthesis of Shape-Controllable Gold Nanoparticles Conjugated With Folic Acid For Cellular Uptake**
Yi-Xuan Chen, National Taiwan University of Science and Technology, Taiwan

Panel Discussion

Day 2 Aug 20, 2019

Invited Talks

Session Chair : **Istvan Halasz**, PQ Corporation, USA

- 10:00-10:25** **Title: Removal of REEs from aqueous solution using aminophenol anchored treated Chinese waste clay**
Mohammed Farid Cheira , Nuclear Materials Authority, Egypt
- 10:25-10:55** **Title: Structure and physical properties of diluted magnetic semiconductor GaGdAs superlattice**
Hayato Miyagawa , Kagawa University, Japan

10:55-11:15 Coffee Break

- 11:15-11:40** **Title: Bismuth Tantalate Based Semiconductors for Visible-Light Active Photocatalysts**
Hadi Razavi-Khosroshahi, Nagoya Institute of Technology, Japan

- 11:40-12:05** **Title: Markedly Enhanced Visible-Light Photocatalytic Degradation of Organic Dyes Using Titania Nanoparticles Pretreated with Alkaline Hydrogen Peroxide**
Chien-Hou Wu, National Tsing-Hua University, Taiwan
- 12:05-12:30** **Title: Coordinating self-assembly: opportunities for materials with controlled structure and properties**
Yun Yan, Peking University, China
- 12:30-12:50** **Title: Exciton Radiative Recombination Dynamics in Surface Energy Dissipations**
Dameng Liu, Tsinghua University, China

Panel Discussion

13:00-14:00 Lunch Break

Featured Talks

- 14:00-14:20** **Title: Experimental and DFT analysis of the thermal stability of hydroxyl nests in zeolite nano pores**
Istvan Halasz, PQ Corporation, USA
- 14:20-14:40** **Title: Self-organization and self-healing processes in porous silicates examined by molecular dynamics simulations**
Junko Habasaki, Tokyo Institute of Technology, Japan
- 14:40-15:00** **Title: Processing of Nonreducible Grain-Oriented Lead-Free Ca-doped BaTiO₃ Piezoelectric ceramics and Their Properties**
Wataru Sakamoto, Chubu University, Japan

Poster Presentations on Day 2 August 20, 2019

- P-001** **Title: Waterborne Corrosion-Resistant Hydrophobic Alkyd Resin Composite Coatings Modified with Fluorinated Acrylate-Siloxane and Submicron-sheet Zinc Phosphate Pigment**
Shenjie Zhong, Zhejiang Sci-Tech University, P. R. China
- P-002** **Title: Effect of surfactants on the particle size of Cu-BTC**
Lu Zhang, Zhejiang Sci-Tech University, P. R. China
- P-003** **Title: Antifouling Carbonaceous microsphere enabled electrospun polyacrylonitrile superhydrophilic nanofibrous membrane for excellent oil/water separation**
Yajie Ding, Zhejiang Sci-Tech University, P. R. China
- P-004** **Title: Study on DNA double helix structure regulating PNPs morphology**
Weishi Zheng, Zhejiang Sci-Tech University, China

Closing Ceremony