

148th Conference
Scientific Federation



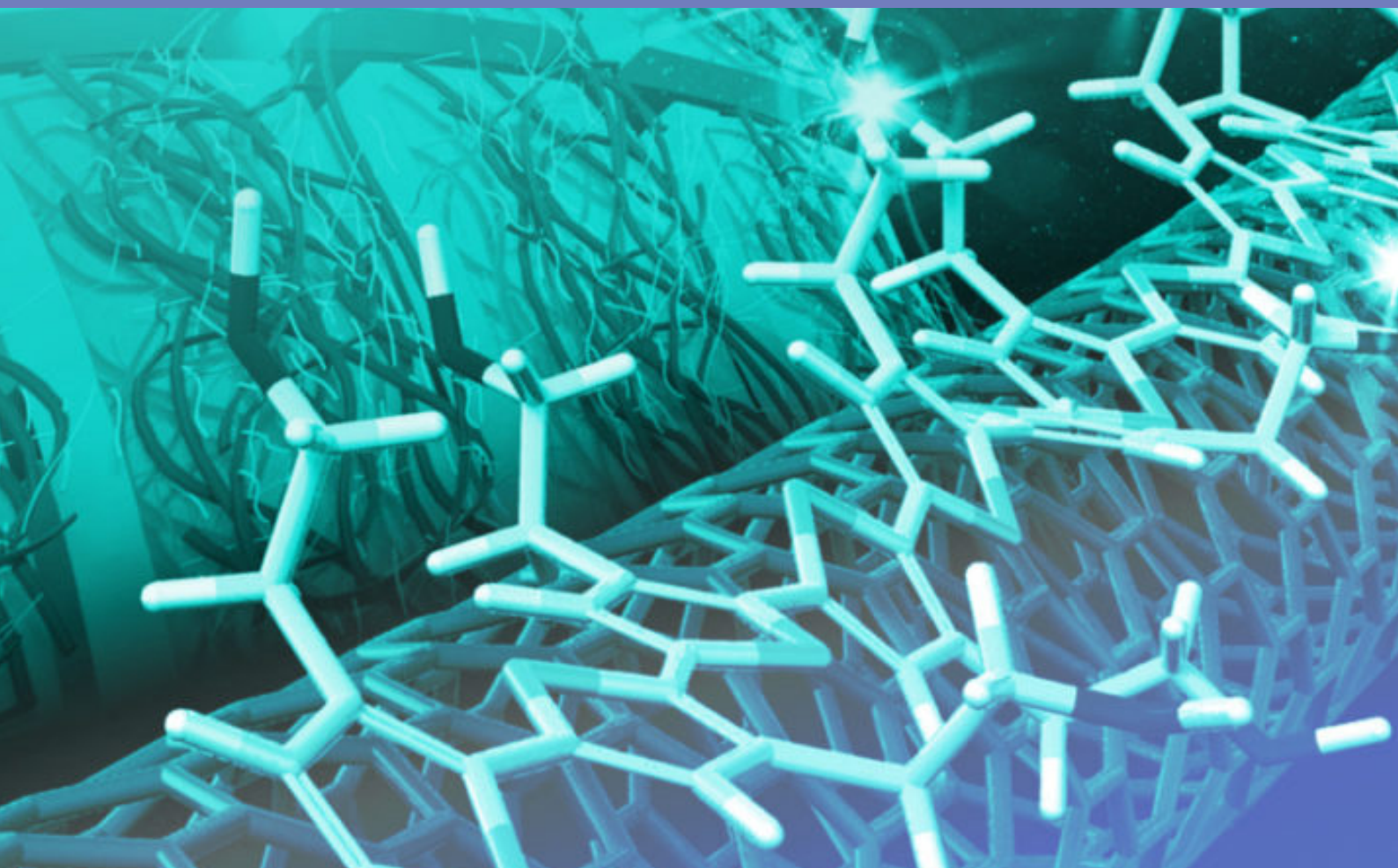
ANA Crowne Plaza Osaka 1-3-1, Dojimahama,
Kita-ku, Osaka, 530-0004, Japan



Scientific Program

5th Global Congress & Expo on Materials Science & Engineering

June 10-11, 2019 | Osaka, Japan



Scientific Federation
Panjagutta, Hyderabad, Telangana-500082, India

Kiri Full Span

08:00-09:00 Registrations
 09:00-09:15 Introduction & Opening Words
 Honorary Speech by Honourable Guests

Plenary Session

Session Chair Prof. Masahiro YOSHIMURA, National Cheng Kung University, Taiwan

Session Co-chair Tohru Sekino, Osaka University, Japan

09:15-10:00 Title: 2D-Inorganic Drug Delivery Vector for Nanomedicine; Challenges and Chances
 Jin-Ho Choy, Dankook University, Republic of Korea

10:00-10:45 Title: Multifunctional Materials for Emerging Technologies
 Federico Rosei, Institut National de la Recherche Scientifique, Canada

Refreshments Break 10:45-11:00 @ Foyer

11:00-11:45 Title: Why have we Proposed “Polymer Complex Method” for Synthesis of Multi-Component Oxides Instead of “Sol-Gel Method”?
 Masahiro YOSHIMURA, National Cheng Kung University, Taiwan

Keynote Session

11:45-12:20 Title: DOS Engineering For New Nano-materials
 Hiroshi Kitagawa, Kyoto University, Japan

12:20-12:55 Title: Nano-hybridization of Titania Nanotubes and Their Photochemical and Physicochemical Multifunctions
 Tohru Sekino, Osaka University, Japan

12:55-13:00 Group Photo

Lunch Break 13:00-13:40 @ Restaurant

13:40-14:15 Title: 2D Nanovector Smuggles 10B-Icosahedral Boron Cluster (BSH) into Cells and Tissues for Boron Neutron Capture Therapy
 Gouen Choi, Dankook University, Republic of Korea

14:15-14:50 Title: The World of Nitride Semiconductors
 Takashi Matsuoka, Tohoku University, Japan

Session A Bio/Medical and Health materials

Session Chair Zhisong Wang, National University of Singapore, Singapore

Session Co-chair Gouen Choi, Dankook University, Republic of Korea

14:50-15:10 Title: Antibacterial Properties of Cuprous Oxide Nanoparticles Immobilized onto Polyethylene
 Marina Nisnevitch, Ariel University, Israel

15:10-15:30 Title: The Mammal Pigment Eumelanin as A New Material for Bioelectronics: Perspectives and Challenges
 Alessandro Pezzella, University of Naples “Federico II”, Italy

15:30-15:50 Title: Electrochemical Deposition of Anti-Cancer Drugs on Metal Implants for Biomedical Applications
 Shiow-Kang Yen, National Chung Hsing University, Taiwan

15:50-16:10 **Title: Advanced Artificial Molecular Motors for Materials Applications**

Zhisong Wang, National University of Singapore, Singapore

Refreshments Break 16:10-16:25 @ Foyer

16:25-16:45 **Title: Impact of Cerium Oxide Nanoparticles Shape on their *in vitro* Cellular Toxicity**

Jérémie Pourchez, Mines Saint-Etienne, University of Lyon, France

16:45-17:05 **Title: Nanowire Fabrication by Site-specific Metallization of DNA Origami Templates**

John N. Harb, Brigham Young University, USA

17:05-17:25 **Title: Nano-formulation Designed for Gas Therapy in Nanomedicine**

Chen-Sheng Yeh, National Cheng Kung University, Taiwan

17:25-17:45 **Title: Possible Electric Reactions of Biomolecules in Living Cells**

Hiroyuki Aizawa, Aizawa Science Museum, Japan

17:45-18:05 **Title: Wrinkled Polymeric Non-planar Surfaces and Cell Growth**

Dae Kun Hwang, Ryerson University, Canada

Keynote Session

18:05-18:40 **Title: Grain Boundary Atomic Structures and Their Dynamic Behavior in Oxides**

Yuichi Ikuhara, The University of Tokyo, Japan

18:40-19:00 **Title: Proton Relaying in Confined NH₃ Medium in Porous Metal-organic Frameworks**

Dae-Woon Lim, Kyoto University, Japan

Closing the Conference for the Day 1

Day 2 June 11, 2019

Kiri Full Span

Oral Sessions

Sessions B **Electronics/Photonics Functional Materials including Conductors and Semiconductors**

Session Chair **Hubert Klar, University Freiburg, Germany**

Session Co -chair **Maria Helena Braga, University of Porto, Portugal**

09:00-09:20 **Title: Mxenes - A New Class of 2D Layered Materials**

Andrews Nirmala Grace, Centre for Nanotechnology Research, VIT University, India

09:20-09:40 **Title: Low Temperature Performance of a Ferroelectric Glass Electrolyte Rechargeable**

Maria Helena Braga, University of Porto, Portugal

09:40-10:00 **Title: Correlation-Induced Electron-Electron-Attraction**

Hubert Klar, University of Freiburg, Germany

10:00-10:20 **Title: Stability of Halide Perovskite Films and Devices**

Aleksandra Djurisic, The University of Hong Kong, Hong Kong

10:20-10:40 **Title: Evolution of Photoluminescence Induced by High Temperature Annealing in Nitrogen Atmosphere of Silicon Nanostructures**

Paola Castrucci, Università di Roma "Tor Vergata", Italy

10:40-11:00 Title: **Two-step Reprecipitation Method for Synthesizing Ultra-small Conductive Polymer Nanoparticles**

Masaru Nagai, Nanjing Tech University, China

Refreshments Break 11:00-11:15 @ Foyer

Session Chair Yuui Yokota, Tohoku University, Japan

Session Co -chair Karen Gambaryan, Yerevan State University, Armenia

11:15-11:35 Title: **Catalytic Combustion-type Carbon Monoxide Gas Sensor with Catalyst Based on Platinum-loaded Ceria Based Oxide Ion Conducting Solids**

Nobuhito Imanaka, Osaka University, Japan

11:35-11:55 Title: **Development of Novel Piezoelectric Single Crystals for Next-generation Sensor Devices and Oscillators**

Yuui Yokota, Tohoku University, Japan

11:55-12:15 Title: **Growth and Characterization of InAsSbP Composition Conic Quantum Dots**

Karen Gambaryan, Yerevan State University, Armenia

12:15-12:35 Title: **Nanoparticle decorated Multi Walled Carbon Nanotubes and Nanocomposites: Next Generation High Intensity Electron Source**

Santanu Ghosh, Indian Institute of Technology Delhi, India

12:35-12:55 Title: **Transition Metal Dichalcogenides for Hydrogen Evolution Reaction**

Soo Young Kim, Chung-Ang University, Korea

Lunch Break 12:55-13:35 @ Restaurant

Session Chair Tien-Lung Chiu, Yuan Ze University, Taiwan

Session Co -chair Renata Bujakiewicz-Korońska, Cracow Pedagogical University, Poland

13:35-13:55 Title: **Graphene-like Silicene Grown on Graphite Surface**

Paola Castrucci, Università di Roma "Tor Vergata", Italy

13:55-14:15 Title: **Polyaniline Functionalized Honeycomb-patterned Porous Polymer Films using Interfacial Polymerization Method**

Umashankar Male, Inje University, Republic of Korea

14:15-14:35 Title: **Silicon-based SiGeSn Group-IV Infrared and Terahertz Photonics**

Greg Sun, University of Massachusetts Boston, USA

14:35-14:55 Title: **Overview of High Efficiency Organic Light Emitting Diodes**

Tien-Lung Chiu, Yuan Ze University, Taiwan

14:55-15:15 Title: **Evolution of Physical Properties of Co doped BaTiO₃ Polycrystals**

Renata Bujakiewicz-Korońska, Cracow Pedagogical University, Poland

Sessions C Energy and Environmental related Materials including Solar Cells, Fuel cells and Catalysis

Session Chair Yasuhiro Tachibana, RMIT University, Australia

Session Co -chair DJURADO Elisabeth, Grenoble INP-University Grenoble Alpes, France

15:15-15:35 Title: **Interfacial Charge Transfer and Transport Dynamics in Lead Halide Perovskite Films**

Yasuhiro Tachibana, RMIT University, Australia

15:35-15:55 Title: **Innovative Design of Efficient La_{2-x}Pr_xNiO_{4+δ}-based Cathode for Solid Oxide Fuel Cells**

DJURADO Elisabeth, Grenoble INP-University Grenoble Alpes, France

- 16:10-16:30** **Title: Approach for the Stable and Efficient Perovskite Solar Cell via Nanostructural Control and Photovoltaic Characterizations.**
Byungwoo Park, Seoul National University, South Korea
- 16:30-16:50** **Title: Semiconductor Nanoheterostructures for Photoconversion Applications**
Yung-Jung Hsu, National Chiao Tung University, Taiwan
- 16:50-17:10** **Title: Self-Organization of Voids and Self-Healing Processes in Porous Lithium Silicate Glasses: A study by Molecular Dynamics Simulations**
Junko Habasaki, Tokyo Institute of Technology, Japan
- 17:10-17:30** **Title: The Role of Nanomaterials in Heterogeneous Catalysis and Tribocatalysis**
Antoni Jankowski, Air Force Institute of Technology, Poland
- 17:30-17:50** **Title: Preparation and Characterization of Titanium Dioxide Photocatalyst Supported on Fly Ash Particles. Evaluation of Photocatalytic Activity in Wastewater Treatment**
Visa Maria, Transilvania University of Brasov, Romania
- 17:50-18:10** **Title: Co-ion Effects in Fuel Cell Membranes**
Ying-Lung Steve Tse, The Chinese University of Hong Kong, Hong Kong
- 18:10-18:30** **Title: Nitrogen-rich Graphitic Tube Supported Platinum Nanoparticles with High Electrocatalytic Activity for Methanol and Ethanol Oxidation**
Mehdi Rahimi-Nasrabadi, Baqiyatallah University of Medical Sciences, Iran
- 18:30-18:50** **Title: Plausible Mechanism of Highly Selective Oxygen Isotope Separation With Nanoporous Materials**
Sanjeev Kumar Ujjain, Shinshu University, Japan

Sessions D Fundamental/Composites/Structural Materials

Session Chair Lara LECLERC, Mines Saint-Etienne, University of Lyon, France

Session Co -chair Makoto Yasutomi, University of the Ryukyus, Japan

- 18:50-19:10** **Title: End-of-Life Incineration of Nanocomposites: New Insights on Nanofillers Partitioning Into by-Products and Biological Outcomes of Airborne Emission and Residual Ash**
Lara LECLERC, Mines Saint-Etienne, University of Lyon, France
- 19:10-19:30** **Title: Thermodynamic Mechanism of Negative Thermal Expansion of Liquid Water**
Makoto Yasutomi, University of the Ryukyus, Japan
- 19:30-19:50** **Title: Pore selective SnS Functionalization in Honeycomb-patterned Films: Breath figure Process Accompanying *in situ* Chemical Reaction**
Do Sung Huh, Inje University, South Korea

Poster Presentations

- P-001** **Title: Durability Potential of Hybrid Cement Under Aggressive Bacterial Influence**
Michaela Smolakova, Technical University of Kosice, Slovakia
- P-002** **Title: Bipyridine Based Platinum Complexes and Their Application to Electroluminescent Devices**
Youngjin Kang, Kangwon National University, Republic of Korea
- P-003** **Title: K(I)/Zn(II) and Rb(I)/Zn(II) Supramolecular Gels Based on Calix[4]arene Derivative**
Ki-Min Park, Gyeongsang National University, South Korea
- P-004** **Title: Characteristics of Codeposition of ZnO/Cu₂O Crystal Films by Electrochemical Processing**
Leo Chau-Kuang Liao, Yuan Ze University, Taiwan

- P-005** **Title: Corrosion Patterns of Electrochemical Reduction of Indium Tin Oxide in Silica Particle Solution Using Diffusion Model Simulation**
Leo Chau-Kuang Liao, Yuan Ze University, Taiwan
- P-006** **Title: Optical Analyses and Fabrication of the ITO/Mesh-Ag/ITO Multilayers as A Highly Conductive Transparent Electrode**
Sang Jik Kwon, Gachon University, South Korea
- P-007** **Title: Preparation and Photoelectrochemical Properties of Silver Particle-Embedded Titania Nanobelts**
Chien-Tsung Wang, National Yunlin University of Science and Technology, Taiwan
- P008** **Title: Efficient Water Splitting Cascade Photoanodes**
Ho Won Jang, Seoul National University, South Korea
- P009** **Title: Examination of Concretes with the Incorporated Waste Materials Regarding Their Radioactivity Parameters**
Adriana Estokova, Technical University of Kosice, Slovakia
- P010** **Title: Engineering Embolic Microparticles from a Periodically-pulsating Charged Liquid Meniscus**
Xiaowei Tian, The University of Hong Kong, Hong Kong
- P011** **Title: Water-resilient Single Walled Carbon Nanotube (SWCNT) based Stretchable Strain Sensor**
Preety Ahuja, Shinshu University, Japan
- P012** **Title: Examination of Concretes with the Incorporated Waste Materials Regarding Their Radioactivity Parameters**
Adriana Estokova, Technical University of Kosice, Slovakia
- P013** **Title: Life Cycle Impact Assessment of Typical Family House in the Central Europe**
Martina Wolfova, Technical University of Kosice, Slovakia
- P014** **Title: Room-Temperature Crack Healing and Properties Recovery for Ti-dispersed Al₂O₃-based Multifunctional Ceramic Composites**
S. F. Shi, Osaka University, Japan
- P015** **Title: Study on Synthesis and Characterization of Lepidocrocite-type Titanate using Peroxo Titanium Complex Ion as a Precursor for Low Alkali Bottom-up Approach**
Hyunsu Park, Osaka University, Japan
- P016** **Title: Sorption properties of Co²⁺ and Zn²⁺ on Titania Nanotubes Synthesized by Solution Processing**
T. Goto, Osaka University, Japan
- P017** **Title: Fabrication of Robust Honeycomb Patterned Porous Polyimide Films by Thermochemical Cross-Linking Process**
Joon Mo Kim, Inje University, Republic of Korea
- P018** **Title: Effect of Ferrocene on The Fabrication of Honeycomb-Patterned Porous Polystyrene Films and Silver Functionalization of the Film**
Soo Yeon Kim, Inje University, Republic of Korea
- P019** **Title: Selective Coating of SnS on the Bio-inspired Moth Eye-like Patterned PEDOT: PSS Polymer Films**
Thuy Thi Cao, Inje University, Republic of Korea

End of the Conference

Bookmark Your Dates

6th Global Congress & Expo on

Materials Science and Nanoscience

October 07-09, 2019 | Dubai, UAE

Bookmark Your Dates

7th Global Congress & Expo on

Materials Science & Engineering

July 13-14, 2020 | Las Vegas, USA

Bookmark Your Dates

8th Global Congress and Expo on

Materials Science and Nanoscience

October 19-20, 2020 | Lisbon, Portugal

