



10<sup>TH</sup> INTERNATIONAL CONFERENCE ON

# MATERIALS SCIENCE & ENGINEERING

October 17-18, 2024

ANA Crowne Plaza Narita, Tokyo, Japan

## TENTATIVE PROGRAMME

October 17-18, 2024

### Day 1 October 17, 2024

08:00-08:40 Registrations

08:40-09:00 Introduction

### Keynote Presentations

09:00-09:40 Title: Computer-assisted Planning, Manufacturing and Surgical Implantation of an Individualized 3D Printed Titanium Cage for Cervical Fusion

**Uwe Spetzger**, Karlsruhe Institute for Technology, Germany

09:40-10:20 Title: Imaging strain tensor of wavy silicon nanomembrane using third-harmonic generation microscopy

**Hyunmin Kim**, Daegu Gyeongbuk Institute of Science & Technology (DGIST), South Korea

Group Photo (10:20-10:30)

Networking & Refreshments @ (10:30-10:45)

### Oral Presentations

Session Chair **Uwe Spetzger**, Karlsruhe Institute for Technology, Germany

Session Chair **Kenji Sorimachi**, Dokkyo Medical University, Japan

### Sessions:

Functional Materials | 3D printed implants and organs | 3D printing & Additive manufacturing | Materials science and Engineering | Environmental and Green Materials | Analytical Chemistry | Composite, Coating and Ceramic Materials | Radiologic Technology | Nanostructures and Nanofilms | Chemical Engineering | Bioceramic materials, Ceramic composites, Bone grafts, and Biodegradable ceramics | Electromagnetic-Wave Absorption | Soft Matter & Nanoscale Materials | Mechanics of Materials and Structures | Biomaterials, Biomechanics & Biosensors | NanoMaterials and Nanotechnology

10:45- 11.15 Title: Thermal characteristics of closed porous aluminum foams infiltrated with phase change material (PCM)

**Rico Schmerler**, Fraunhofer IWU, Germany

11.15 - 11.45 Title: The influence of cold spray parameters and feedstock powder sizes on corrosion behavior of cold sprayed Inconel®625 deposits

**Farrokh Taherkhani**, Helmut Schmidt University, Germany

11.45 - 12.15 Title: Ambient Air-Processed CsPbI<sub>3</sub>-Based Perovskite Solar Cell Via Semi-Sputtering Deposition And Numerical Studies Of Cs<sub>3</sub>Sb<sub>2</sub>I<sub>9</sub>-Based Perovskite Solar Cell

**Hasina Huq**, The University of Texas, USA

12.15 - 12.45 Title: Effect of Zinc Oxide (ZnO) Dopant on the Physical and Electrical Properties Potassium Sodium Niobate Thin Films

**Mohd Warikh Abd Rashid**, Universiti Teknikal Malaysia Melaka , Malaysia

12.45 - 13.15 Title: Preparation and application of new materials based on natural deep eutectic solvents for extraction environmental pollutants

**Justyna Werner**, Poznan University of Technology, Poland

Lunch @ (13:15-14:00)

Keynote Presentation

14.00 - 14.40 Title: Novel Direct Air Capture (DAC) for CO<sub>2</sub> Production

**Kenji Sorimachi**, Dokkyo Medical University, Japan

Oral Presentations

14.40 - 15.10 Title: Toward a collaborative platform to foster material circularity of electrical and electronic equipment

**Rinaldo Garziera**, University of Parma, Italy

15.10 - 15.40 Path-Planning and Obstacle Avoidance Algorithms for UAVs: A Systematic Literature Review

**Khawla Saif Almazrouei**, Technology Innovation Institute (TII), United Arab Emirates

15.40 - 16.10 Title: The Development of Radiation Shielding Materials Involves Incorporating Lanthanum Oxide Dopants into Glass

**Siriprapa Kaewjaeng**, Chiang Mai University, Thailand

**Speaker Slots Available.!**

Networking & Refreshments @ (16:10-16:40)

Poster Presentations (16:40-18:00)

Poster 001 Title: Preparation of nanostructured copper oxide by means of wet corrosion process (WCP) and their application to photocatalysis

**Yuta Igawa**, Shibaura Institute of Technology, Japan

Poster 002 Title: Degradation of Sulfapyridine by Ozone-based Oxidation

**Chung-Hsin Wu**, National Kaohsiung University, Taiwan

Poster 003 Title: Quantifying bioceramic bone graft degradation processes in a biochip

**Man-Ping Chang**, National United University, Taiwan

Poster 004 Title: Enhanced Electromagnetic-Wave Absorption Properties of Photosensitivity Epoxy/ Nano Cobalt Buckyball Metastructure Composites

**Yu-Cheng Kuo**, National Chin-Yi University of Technology, Taiwan

Poster 005 Title: Molecular mechanism of viscoelastic creep deformation of polyelectrolyte elastomers

**Mohammad Reza Adibeig**, Sustech University, China

Poster 006 Title: Calibration of Visco-hyperelastic Materials using Cyclic Loading

**Abuzar Es'haghi Oskui**, Sustech University, China

Poster 007 "Title: Preparation of porous degradable bone substitutes using calcium sulfate/hydroxyapatite"

**Zheng-Kai Fu**, National United University, Taiwan

Poster 008	Title: Characterization of Amino-terminated Self-Assembled Monolayer on Cu/Porous low-k Dielectrics <b>Yi Lung Cheng</b> , National Chi-Nan University , Taiwan
Poster 009	Title: Materials Science <b>Min Ju Jung</b> , Pukyong National University, South Korea
Poster 010	Title: Formation of carbon nanomaterials-based hybrids and their application for electromagnetic wave shielding effectiveness <b>Sung-Hoon Kim</b> , Silla University, South Korea
Poster 011	Title: Preparation Of Effective Heavy Metal Sorbents From Sodium Polysulfide And Epichlorohydrin Production Wastes <b>Yerlan Abdykalykov Nurzhanuly</b> , D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
Poster 012	Title: Adsorption Characteristics Of A Sulfur-Containing Oligomer Based On Chlorex <b>Arailym Nalibayeva</b> , D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan

## Day 2 October 18, 2024

### Keynote Presentation

09:00-09:40	Title: Investigation of Heat Treatment on Dry Sliding Wear Behaviour of Thixoformed GNPs-A356 Matrix Composites <b>Mohd Shukor Salleh</b> , Universiti Teknikal Malaysia Melaka, Malaysia
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### Oral Presentations

#### Sessions:

Environmental and Green Materials | Nano medicine | Energy Materials and Sustainability | Encapsulation | Polymeric nanofiber | Nanofiber composite | Materials Science and Engineering | Computational Materials Science | Materials Chemistry | Polymers & Biopolymers | Surface Science and Engineering

09:40-10:10	Title: Development and Evaluation of Cost-Effective Silver Nanoparticle-Infused Pharmaceutical Hydrogels for Antimicrobial Applications <b>Alaaldin M. Alkilany</b> , Qatar University, Qatar
10:10-10:40	"Title: Tailoring Composite Materials for Enhanced EM Pollution Mitigation: The Role of Carbon Black and Cobalt" <b>Yi Jen Huang</b> , National Chin-Yi University of Technology, Taiwan

### Networking & Refreshments (10.40 - 11.00)

11.00 - 11.30	Title: Synthesis of the targeted metal-organic framework as a novel strategy for improving antitumor therapeutic efficacy <b>Xiao Fu</b> , Shandong First Medical University, China
11.30 - 12.00	Title: Dynamic testing of self-healing asphalt concrete with encapsulated modifier <b>Inozemtsev Sergei</b> , Moscow State University of Civil Engineering, Russia
12.00 - 12.30	Title: Predicting Flow-Related Dynamic Recrystallization Parameters and Grain Size Evolution in Hot Forging of SCR420HB Using a Direct Method <b>Mohd Kaswande Razali</b> , Metal Forming Research Corporation, South Korea
12.30 - 13.00	Title: Carbon Quantum Dots from Waste Materials for Metal Ion Sensing <b>Nigamuni Binu Parlindie Senanayake</b> , Swinburne University of Technology, Australia

### Lunch (13:00 - 14:00)

14.00 - 14.30	Title: Electrospun polycaprolactone (PCL) nanofibers containing endophytic fungi metabolite-based antibacterial additives from Australian native plants for wound dressing applications <b>Meysam Firoozbahr</b> , Swinburne University of Technology, Australia
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14.30 - 15.00	Title: Challenges and solutions regarding the fatigue behaviour of thermal direct joints made of titanium and CF-PAEK for aerospace applications <b>Benjamin Forster</b> , Fraunhofer-Institute for Material and Beam Technology IWS, Germany
15.00 - 15.30	Title: Polymer nanocomposite materials for application X: The role of nanoscale dimension <b>Ioannis Zuburtikudis</b> , Abu Dhabi University, U.A.E
15.30 - 16.00	Title: TFN nanofiltration membranes containing GO nanoparticles with enhanced water selectivity and anti-fouling properties <b>Ioannis Zuburtikudis</b> , Abu Dhabi University, U.A.E
16.00 - 16.30	Title: Machine learning approaches to accelerate the computation of finite temperature properties of solid materials <b>Pinku Nath</b> , Hokkaido University, Japan

## Speaker Slots Available.!

Virtual Presentations	
1	Title:Electrospun Polymeric Membranes for Tissue Engineering and Cell Growth <b>Maria Helena Ambrosio Zanin</b> , IPT - Instituto de Pesquisas Tecnologicas, Brazil
2	Title: Investigation The Effect Of Combined Quenching And Deep Cryogenic Treatment On Wear Behavior Of Martensitic Ductile Irons <b>Salome Gvazava</b> , Georgian Technical University, Georgia
3	Extraction and characterization of cellulose nano crystals from durian peel waste through oxidation method <b>Henny Pratiwi</b> , Universitas Gadjah Mada, Indonesia
4	Rapid and highly efficient removal of aqueous perfluorooctanoic acid using deep eutectic solvents for sustainable water remediation <b>Sana Eid</b> , Khalifa University, United Arab Emirates
5	Viscoelastic future in chiral ferroelectric and antiferroelectric liquid crystals <b>Dorota Dardas</b> , Academy of Sciences, Poland
6	Optimizing CZTS Solar Cells: Enhancing Efficiency with rGO and TiO <sub>2</sub> for Sustainable Energy Solutions <b>Fatihi Dounia</b> , University of Casablanca, Morocco
7	High-Performance Piezo-Responsive Membrane for Efficient Dye Degradation and Sustainable Water Treatment <b>Indrajit Mondal</b> , Jadavpur University, India
8	Piezo-Driven Antibacterial Chitosan/ ZrO <sub>2</sub> Membrane for Rapid and Reusable Coliform Bacterial Disinfection <b>Piyali Halder</b> , Jadavpur University, India

**Note: This is tentative program only Timings are subjected to change.**

**Oral/Poster Slots Available**  
**Delegates/ Listeners Slots Available**

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DATES TO REMEMBER	
<b>Final Abstract submission Opens</b>	
Final Call Registration	07 <sup>th</sup> October, 2024
On spot registration:	17 <sup>th</sup> October, 2024

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## Venue

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**Conference Venue:** ANA Crowne Plaza Narita, Tokyo, Japan

**Accommodation Venue:** Toyoko Inn Narita Airport Honkan,  
Tokyo, Japan

The conference accommodation will be booked in **Toyoko Inn Narita Airport Honkan, Tokyo, Japan.**

The distance between conference venue **ANA Crowne Plaza Narita** and **Toyoko Inn Narita Airport Honkan** is **2 km.**

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