

South Asia Institute of Science and Engineering

ICMSET ICCME

2024 the 13th International Conference on *Material Science and Engineering Technology*

2024 the 11th International Conference on *Chemical and Material Engineering*

Nagoya Convention Hall, Nagoya, Japan

November 22-24, 2024
Friday - Sunday

Address: 〒453-6102 愛知県名古屋市中
村区平池町 4-60-12 グローバルゲート

WWW.ICMSET.COM

WWW.ICCME.ORG

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北京研工新材料技术研究院

BEIJING INDUSTRIAL RESEARCH INSTITUTE OF ADVANCED MATERIALS TECHNOLOGY

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Welcome

Thank you for your attendance at the 2024 the 13th International Conference on Material Science and Engineering Technology (ICMSET 2024), 2024 the 11th International Conference on Chemical and Material Engineering (ICCM 2024). It is such excited that we bring the event to Nagoya this year through much preparation.

ICMSET and ICCM are sponsored by South Asia Institute of Science and Engineering (SAISE), Washington University in St. Louis, USA, Beijing Industrial Research Institute of Advanced Materials Technology, University of Electronic Science and Technology of China, China and Centro de Investigación Científica de Yucatán, Mexico. It is poised to be a melting pot of participants from academia, industries and government agencies to share and exchange experiences, new ideas and enabling technologies. Those technologies will address the enormous challenges confronting the new landscape of science, engineering and technology pertinent to materials. We would like to express our sincere thanks to the organizers, SAISE, and all committee members, for their devotion to the conference.

After several rounds of review, the program committee has finalized those papers accepted into our conference proceedings. We wish to express our sincere appreciation to all the individuals who have contributed to conferences. Special thanks are also extended to our colleagues in the program committee for their thorough review of all the submissions, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, and organizing the conferences. Last but not least, our special thanks go to invited keynote speakers as well as all the delegates for their contribution to the conferences.

This conference program is highlighted by two keynote speakers and two invited speakers, following by nine onsite oral sessions, two poster sessions, one online session, mainly introduce the latest development in related fields. Moreover, to inspire the young, we set best presentation competition.

Enjoy your participation at our conferences and we wish you have a fruitful encounter during the conferences. Most of all, please take good care of yourself during the participation. Looking forward to meeting you next year in ICMSET and ICCM!



ICMSET & ICCM Organizing Committee

Location

Nagoya Convention Hall

Address: 〒453-6102 愛知県名古屋市中村区平池町 4-60-12 グローバルゲート

•4-60-12 Hiraike-chou, Nakamura-ku, Nagoya, Aichi, 453-6102, Japan

•TEL: 052-433-1488 FAX: 052-433-1489

**By shinkansen**

12-min. walk from Nagoya Station

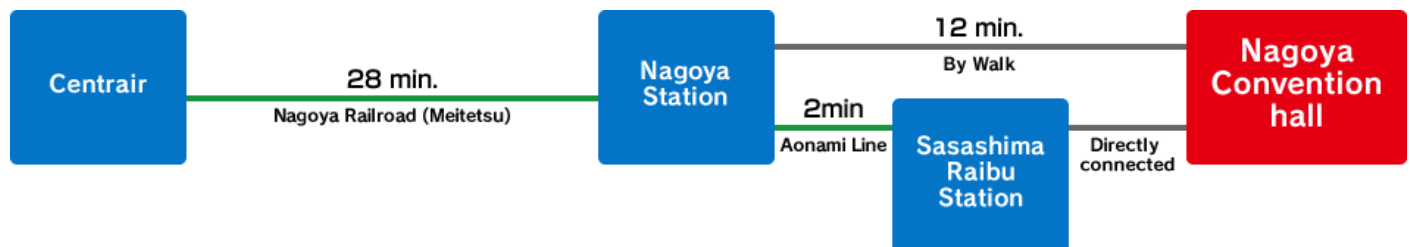
Directly connected to Sasashima-Raibu Station (Aonami Line)

From Chubu Centrair International Airport

60 - 70 minutes to Nagoya Convention Hall & Hybrid Studio.

●Take a Meitetsu Train (limited express, μ sky, etc.) to Nagoya station, get a taxi or walk to Nagoya Convention Hall, or take an Aonami line train to Sasashima Raibu Station, which is connected to Nagoya Convention Hall.

●Take a Meitetsu airport bus, "Centrair Limousine," from Chubu Centrair International Airport to Nagoya Station, get a taxi or walk to Nagoya Conventional Hall, or take Aonami Line train to Sasashima Raibu Station, which is connected to Nagoya Convention Hall.



Onsite Guideline

🌀 Oral Presentation

- Timing: a maximum of 15 minutes total, including speaking time and discussion. Please make sure your presentation is well timed. Please keep in mind that the program is full and that the speaker after you would like their allocated time available to them.
- You can use USB flash drive (memory stick), make sure you scanned viruses in your own computer. Each speaker is required to meet her/his session chair in the corresponding session rooms 10 minutes before the session starts and copy the slide file(PPT or PDF) to the computer.
- It is suggested that you email a copy of your presentation to your personal inbox as a backup. If for some reason the files can't be accessed from your flash drive, you will be able to download them to the computer from your email.
- Please note that each session room will be equipped with a LCD projector, screen, point device, microphone, and a laptop with general presentation software such as Microsoft PowerPoint and Adobe Reader. Please make sure that your files are compatible and readable with our operation system by using commonly used fronts and symbols. If you plan to use your own computer, please try the connection and make sure it works before your presentation.
- Videos: If your PowerPoint files contain video clips, please make sure that they are well formatted and connected to the main files.

🌀 Poster Presentation

- The poster must not exceed A0, 841*1189 mm, portrait style preferred. We suggest the author print the poster beforehand, bringing it along to the conference. The font size shall be readable by the participants from 1.5 meter away. The contents should be understandable even without the author's details explanation.

🌀 Dress Code

- Please attend the conference in formal attire.

🌀 Conference Photos

- All the conference photos will be available for download through conference website within one week after the conference.

🌀 Safety Reminder: Secure Valuable Items at All Times

- We remind you to secure your personal belongings at all times.
- Please remember to:
 - Wear your Conference Identification Badge at all times. Do not throw away Badge.
 - If you are using a laptop computer, do not leave it unattended at any time.
 - Keep your purse, wallet and other valuables with you at all times.
- The conference organizer will not be responsible for the loss or damage to any personal belongings.

Online Guideline



Preparation

- The device should be **equipped** with mic, camera, and stable internet connection.
- The presentation environment is required to be quiet, with proper lighting.
- Note the day and time of your oral session presentation. Please arrive at least 10 minutes before the session starts and **rename your attendance ID** into Paper ID-Name, e.g. 520-Jane Austin.
- There will be no rearrangement of papers within an oral session to accommodate absences or cancellations. The time assigned to an oral presentation within the oral session is fixed.



ZOOM

- The account is not mandatory to attend the conference. If you do not want to register the account, by entering meeting ID is also accessible to our conference.

Download zoom at: https://zoom.us/download#client_4meeting

- Join the test session to make sure you can enter the meeting room smoothly.



Reminder

- Attention: The conference will be recorded; we will be grateful with your proper behavior.
- A staff is assigned to each session room and is in charge of the smooth running of your session. This person will be in the session room and is at your disposal. Please feel free to introduce yourself and inquire about anything you might need. Please stay at the room until the session is finished.
- The certificate will be sent after the speech in Chat or through mail attachment by secretary. One best presentation will be selected from each session, and the best one will be announced and awarded at the end of each session.
- Remember the four rules of **effective presentation** are:
 - Introduce your topic and inform your audience what you intend to speak about;
 - Deliver your talk, including the methods, results and conclusions;
 - Summarize for your audience the most important points of your lecture;
 - Carefully note the allotted time for your presentation.
- Please be aware that all the presentations happen in Japan local time, in UTC+9 time zone.

Committee

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Noor Yahida Yahya, Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia

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Kuibo Yin, Southeast University, China

Seung-Keun Park, Chung-Ang University, South Korea

Lai-Chung Lee, Minghsin University of Science and Technology, Taiwan

Program Overview

November 22nd, 2024, Fri

I. For Onsite Attendees: Conference Kits Collection

Onsite Sign-In & Kits Collection at

Room 303, 3F, Nagoya Conventional Hall

10:00-17:00

Address: 〒453-6102 愛知県名古屋市中村区平池
町 4-60-12 グローバルゲート

Inform

- Arrive at Room 303 of Nagoya Convention Hall
- Inform the Onsite Staff of the Paper ID

Sign

- Sign your Name on the Sign-in Book
- Select your Meal Arrangement on the Book

Confirm

- Confirm the Kits you Collect
- Confirm the Room for Event

If you cannot sign-in on Nov. 22nd, please arrive at room 303 in the earlier morning on Nov. 23rd. Thank you.

II. For Online Attendees: Zoom Test (UTC+9, Japan Time)

14:30-15:30	Test for Online Attendees
14:30-15:30	ET24-5260
Zoom ID:	ET24-5140
831 0431 8451	ET24-7050
	ET24-511
	ET24-5136
	ET24-595
	ET24-5130
	ET24-560
	ET24-1285
*Please enter the room in the related duration. *Please attend the test to ensure your device is available. *Please prepare headphone/earphone. *Please prepare slides or files for sharing screen use. * Zoom Access Linkage: https://us02web.zoom.us/j/83104318451	

Program Overview

November 23rd, 2024, Sat

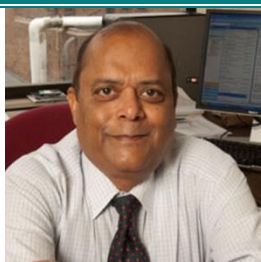
09:00-09:10	Room 301, 3F	Welcome Address Prof. Ramesh K. Agarwal, Washington University in St. Louis, USA
09:10-09:55		Keynote Speech 1 Prof. Yusuke Yamauchi, The University of Queensland, Australia / Distinguished Professor, Nagoya University, Japan <i>Materials Space-Tectonics: A Conceptual Paradigm for Creating Second-Generation Porous Materials</i>
09:55-10:40		Keynote Speech 2 Prof. Ramesh K. Agarwal, Washington University in St. Louis, USA <i>Shape Memory Alloys for Aerospace Applications</i>
10:40-11:00		Coffee break & Group Photo
11:00-11:30		Invited Speech 1 Assoc. Prof. Yew Ming Kun, Universiti Tunku Abdul Rahman (UTAR), Malaysia <i>Novel Eco-Friendly Ultra-Lightweight Foamed Fibre-Reinforced Floating Concrete</i>
11:30-12:00		Invited Speech 2 Assoc. Prof. Adnan Younis, United Arab Emirates University, UAE <i>Solution-processed Ceria Nanostructures for Electronics, Energy Storage and Environmental Remediation Applications</i>
12:00-13:00		Lunch Break
13:00-15:00	Room 301, 3F	Session 1 - Advanced Optical Materials and Devices
13:00-15:00	Room 303, 3F	Session 2 - Nanomaterials and Applied Catalysis
13:00-15:00	Room 302, 3F	Poster session 1 – <i>Multi-functional Intelligent Materials and Nanotechnology for Wearable Devices, Energy Storage, and Biomedicine</i>
15:00-15:15		Coffee Break
15:15-17:15	Room 301, 3F	Session 3 - Energy Materials and Electrochemistry
15:15-17:15	Room 303, 3F	Session 4 - Metal Processing and Analysis of Corrosion Behavior
15:15-17:15	Room 302, 3F	Poster Session 2 – Polymer Composite Materials, Energy Materials, and Catalysts
17:30-20:00	Room 406, 4F	Dinner Banquet at 406 and Award Ceremony

Program Overview

November 24th, 2024, Sun

10:00-12:00	Room 211, 2F	Session 5 <i>Biomedical Materials and Biochemical Engineering</i>
10:00-12:00	Room 207, 2F	Session 6 <i>Polymer Chemistry and Waste Resource Utilization</i>
12:00-13:30	Lunch Break	
13:30-15:00	Room 211, 2F	Session 7 <i>Performance Evaluation of Building Materials and Structures</i>
13:30-15:15	Room 207, 2F	Session 8 <i>Additive Manufacturing and Precision Processing</i>
15:15-16:45	Room 211, 2F	Session 9 <i>Multi-functional Intelligent Materials and Nanotechnology for Wearable Devices, Energy Storage, and Biomedicine</i>
Online Session		
10:00-12:15	https://us02web.zoom.us/j/83104318451 Zoom Meeting Room ID: 831 0431 8451	

Keynote Speaker


Prof. Ramesh K. Agarwal
Washington University in St. Louis, USA

Speech Time: 09:55-10:40
301, 3F, Nagoya Convention Hall, Nov. 23rd

Biography: Professor Ramesh K. Agarwal is the William Palm Professor of Engineering in the department of Mechanical Engineering and Materials Science at Washington University in St. Louis. From 1994 to 2001, he was the Sam Bloomfield Distinguished Professor and Executive Director of the National Institute for Aviation Research at Wichita State University in Kansas. From 1978 to 1994, he was the Program Director and McDonnell Douglas Fellow at McDonnell Douglas Research Laboratories in St. Louis. Dr. Agarwal received Ph.D in Aeronautical Sciences from Stanford University in 1975, M.S. in Aeronautical Engineering from the University of Minnesota in 1969 and B.S. in Mechanical Engineering from Indian Institute of Technology, Kharagpur, India in 1968. Over a period of forty years, Professor Agarwal has worked in various areas of Computational Science and Engineering - Computational Fluid Dynamics (CFD), Computational Materials Science and Manufacturing, Computational Electromagnetics (CEM), Neuro-Computing, Control Theory and Systems, and Multidisciplinary Design and Optimization. He is the author and coauthor of over 500 journal and refereed conference publications. He has given many plenary, keynote and invited lectures at various national and international conferences worldwide in over fifty countries. Professor Agarwal continues to serve on many academic, government, and industrial advisory committees. Dr. Agarwal is a Fellow eighteen societies including the Institute of Electrical and Electronics Engineers (IEEE), American Association for Advancement of Science (AAAS), American Institute of Aeronautics and Astronautics (AIAA), American Physical Society (APS), American Society of Mechanical Engineers (ASME), Royal Aeronautical Society, Chinese Society of Aeronautics and Astronautics (CSAA), Society of Manufacturing Engineers (SME) and American Society for Engineering Education (ASEE). He has received many prestigious honors and national/international awards from various professional societies and organizations for his research contributions.

Title of Speech
Shape Memory Alloys for Aerospace Applications

Abstract: Shape memory alloys (SMAs) are special class of metallic alloys which show the ability to recover from their original shape at some characteristic temperatures (it is called the shape memory effect), even under high loading and large inelastic deformations. Also, they can undergo large strains without plastic deformation or failure exhibiting super-elasticity. Thus, they offer several advantages that the product designers can exploit such as the possibility of transmitting large forces and deformations, compactness, and the intrinsic capability to absorb loads. In addition, in some applications their use as monolithic actuators can lead to potential simplifications of the system through a reduction of number of parts and the removal of other redundant mechanisms. For these reasons, in past couple of decades the aerospace industry has paid increasing attention on using SMAs, even though issues regarding their fatigue life and performance degradation need to be addressed. In this keynote review paper, we describe the main features of SMAs, their constitutive models and their properties. We also review the fatigue behavior of SMAs, and some methods adopted to remove or reduce its undesirable effects. The review includes examples of applications of SMAs in fighter aircraft, transport aircraft, rotorcraft, UAV and spacecraft.

Keynote Speaker



Prof. Yusuke Yamauchi
The University of Queensland, Australia;
Distinguished Professor, Nagoya University,
Japan

Speech Time: 09:10-09:55
301, 3F, Nagoya Convention Hall, Nov. 23rd

Biography: Professor Yusuke Yamauchi received his Bachelor's degree (2003), Master's degree (2004), and Ph.D. degree (2007) from Waseda University, Japan. After receiving his Ph.D., he joined the National Institute of Materials Science (NIMS) in Japan, to start his own research group. At the same time, he began to serve as an adjunct professor to supervise Ph.D. students at the Department of Nanoscience and Nanoengineering, Waseda University. After being granted the ARC Future Fellowship, in May 2016, he joined the Institute for Superconducting & Electronic Materials (ISEM), the Australian Institute for Innovative Materials (AIIM) at the University of Wollongong (UOW) as a Professor. In 2017, he moved to the University of Queensland (UQ). Presently, he is a Senior Group Leader at the Australian Institute for Bioengineering and Nanotechnology (AIBN) (on secondment from the School of Chemical Engineering until 2026), a Professor at the School of Chemical Engineering, and a Director at the Australian Materials nanoTectonics Centre, UQ. He concurrently serves as an ERATO Research Director at the JST-ERATO Yamauchi Materials Space-Tectonics, a Distinguished Professor at Nagoya University (Japan), an Honorary Distinguished Professor at Yonsei University (South Korea), an Invited Researcher at the National Institute for Materials Science (NIMS), a Guest Senior Researcher (Guest Professor) at Waseda University, an Advisory Board Member of prestigious journals (Small, Small Structures, Precision Chemistry, ChemCatChem, J. Inorg. Organomet. Polym. Mater., etc.) and an Associate Editor of the Journal of Materials Chemistry A published by the Royal Society of Chemistry (RSC) and Chemical Engineering Journal (Elsevier).

Title of Speech

Materials Space-Tectonics: A Conceptual Paradigm for Creating Second-Generation Porous Materials

Abstract: Different types of inorganic nanomaterials have been designed by using various methods including sol-gel, electrochemical/chemical reduction, calcination, hydrothermal reaction, etc. The dimensionality of these nanomaterials (x, y, z) can be classified as zero-dimensional (0D), one-dimensional (1D), two-dimensional (2D), or three-dimensional (3D), respectively. Accordingly, for 0D nanomaterials dimensions are measured on the nanoscale (< 100 nm for each dimension). 0D nanomaterials, for example nanoparticles (or sometimes, nanocrystals), most commonly have isotropic morphologies where the usually thermodynamically stable planes of lower reactivity are exposed at the nanoparticles' surfaces. For 1D nanomaterials, a single dimension is extended beyond the nanoscale. This class of nanomaterials includes nanotubes, nanorods, and nanowires. In contrast to 0D and 1D nanomaterials, 2D nanomaterials have recently attracted great interest for the next generation of promising. However, such 2D materials are often formed by stacking/assembly, processes that vastly reduce their active surface areas, and negatively affects their performance in potential applications. Despite recent and significant advances in inorganic nanomaterials of different dimensionalities, we still remain active in making substantial efforts to develop new nanomaterials to help address energy- and environmental-related issues. Our group is fully aware of the serious limitations of the currently available materials' designs. The continued use of the current nanomaterials design paradigm based on traditional 0D, 1D, 2D nanomaterials obscures the innovative approaches required to address the aforementioned serious issues. Therefore, we have developed a new conceptual paradigm "materials space-tectonics" which is defined as the creation of novel mesoporous/nanoporous materials with precisely controlled internal space (or pore size), composition, and morphology with the assistance of nanomaterials informatics to optimize their functional applications. We will present our recent advance on nanoarchitectural chemistry.

Invited Speaker



Assoc. Prof. Dr. Yew Ming Kun
Universiti Tunku Abdul Rahman (UTAR),
Malaysia

Speech Time: 11:00-11:30
301, 3F, Nagoya Convention Hall, Nov. 23rd

Biography: Dr. Yew Ming Kun, a distinguished scholar and innovator, obtained his Ph.D. in Civil and Environmental Engineering from the prestigious University of Malaya (UM) in 2015. Currently, he serves as an esteemed Associate Professor in Civil Engineering at Universiti Tunku Abdul Rahman (UTAR), where he has mentored and guided a significant number of postgraduate students, fostering their growth and engagement in numerous groundbreaking projects. Under his leadership, these endeavors have resulted in award-winning products, patents, and the development of cutting-edge "Green & Sustainable Building Materials." As a highly accomplished Principal Investigator (P.I) and Co-P.I, Dr. Yew has secured an impressive ten (10) intellectual property rights, spanning both international and national domains. His exceptional work has been recognized with prestigious accolades, including Gold Medals at ITEX in 2011, 2019, 2020, and 2022, as well as a coveted Gold Medal at iENA 2012 in Germany. Most recently, he was bestowed with the distinguished honor of The Best Green Technology Award by the Japan Intellectual Property Association (JIPA-2022), a testament to his groundbreaking contributions in the field of sustainable technologies. Dr. Yew's scholarly impact is evident through his extensive publication record, with more than 90 technical papers to his name. His research primarily focuses on innovative and sustainable construction materials, as well as fire protective materials and coatings, with a strong emphasis on environmental sustainability. His expertise and leadership are further recognized through his prominent positions as the Lead Guest Associate Editor and Editorial Board Member for over 10 scientific journals, as well as an invited reviewer for more than 20 SCI Journals. In 2023, he was awarded the prestigious Outstanding Editor Award, and in 2020 and 2023, he received the coveted Most Innovation Excellence Award, further solidifying his status as a trailblazer in his field.

Title of Speech

Novel Eco-Friendly Ultra-Lightweight Foamed Fibre-Reinforced Floating Concrete

Abstract: This groundbreaking, eco-friendly ultra-lightweight foam floating concrete (ULWFFC) is developed using renewable modified oil palm shell (OPS) as a bio-based lightweight aggregate and recycled solid polyurethane foam (SPUF) as a filler for cavities. The primary objective of this study is to comprehensively evaluate the strength and functional characteristics of ULWFFC by incorporating different percentages of bio-based and SPUF aggregates, with a targeted density ranging from 550-850 kg/m³ and compressive strength surpassing 3.5 MPa. This innovative material adheres to the principles of 3R (recycled, reusable, and renewable) and complies with the Restriction of Hazardous Substances (RoHS) directive, ensuring a sustainable and environmentally friendly solution. Furthermore, the cost-effective production process and outstanding functional properties, including thermal conductivity, fire resistance, sound insulation, and buoyancy performance, make it an attractive option for various applications. The integration of lightweight polypropylene fiber in reinforced ULWFFC enhances overall performance, particularly in terms of tensile strength and functional properties, making it a compelling solution for advanced applications in construction and building materials, aquaculture, coastal regions, floating solar farms, and the offshore marine sector.

Invited Speaker



Assoc. Prof. Adnan Younis
United Arab Emirates University, Al Ain UAE.

Speech Time: 11:30-12:00
301, 3F, Nagoya Convention Hall, Nov. 23rd

Biography: Dr. Adnan Younis is an Associate Professor of Physics in the Department of Physics at UAEU. He received his Ph.D. degree in Materials Science and Engineering from the University of New South Wales, Australia. His field of research is the development of nanomaterials, perovskite materials, and their applications in electronic devices, clean energy storage devices, and wastewater treatment. He has published over 80 journal papers and several book chapters in high-impact peer-reviewed journals. He has been recognized as the Top 2% of highly cited researchers in the world according to Stanford University's list of highly cited researchers in 2021 and 2022. He is an Editorial board member of several high-impact journals.

Title of Speech

Solution-processed Ceria Nanostructures for Electronics, Energy Storage and Environmental Remediation Applications

Abstract: For the past three decades, Nanotechnology has grown at an enormous rate and recent advances in nanostructured materials and nanodevices have opened up new opportunities in a variety of applications, ranging from information and communication technology to healthcare and medicine. The fabrication of modern electronic devices through solution processing enabled us to molecular-level control of material composition and structure that may lead to devices and fabrication strategies not possible with conventional top-down methods.

Resistive random-access memories (RRAM) are promising alternatives to existing computer memories which may offer a potential leap beyond the limits of Flash memories (concerning write speed, write energies) and Dynamic random access memories DRAM (concerning scalability, retention times). A conventional RRAM cell is composed of an insulating/dielectric layer sandwiched between two metallic layers. In this talk, I will highlight some novel ceria-based nanostructures fabricated using solution-processed methods for their applications as RRAMs. The overview of physical and electrochemical processes which may be the origin of the switching phenomenon in these materials will be discussed. The application of various ceria nanostructures from rods to nano-micro biscuits and the micro walls for energy storage capacitors will be presented. Finally, environmental remediation applications such as photocatalytic activities of ceria-based catalysts will be highlighted.

Session 1, Room 301

Advanced Optical Materials and Devices

Session Chair: Dr. Arseniy Kuzmin, Kyoto University, Japan

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-515-A

13:00-13:15

Growth and Characterization of non-polar a-plane AlGaIn-based MQWs Emitting around 260 nm
Ruiting Fang
 Southeast University, China

ET24-204-A

13:15-13:30

Microwave-melted Dy³⁺ ion Doped Lithium Zinc Boro-Tellurite Glass for White LEDs
Winut Wongwan, Patarawagee Yasaka, Kittipun Boonin, Jakrapong kaewkhao
 Nakhon Pathom Rajabhat University, Thailand

ET24-584-A

13:30-13:45

Optical Behaviour of Magnetron Sputtered Nano-hilled TiN Coatings
Sayan Atta, Shreyas Karthikeya, Sitaram Dash, Uttamchand NarendraKumar, Arun Tom Mathew
 Vellore Institute of Technology, India

ET24-203-A

13:45-14:00

Influence of Host Matrix on Optical Properties of Samarium-Doped Glasses: A Comparative Analysis Across Zinc Oxide and Zinc Fluoride
Wiraphat Thanyaphirak, Patarawagee Yasaka, Kittipun Boonin, Jakrapong kaewkhao
 Nakhon Pathom Rajabhat University, Thailand

ET24-5081

14:00-14:15

Fabrication and Simulation of Broadband Surface-Enhanced Raman Spectroscopy (SERS) based on Disordered Nanoplasmonics
Supitsara Patpong, Panuwat Pengphorm, Sirawit Boonsit, Pruet Kalsuwan, Nonthanan Sitpathom and Chalongrat Daengngam
 Prince of Songkla University, Thailand

ET24-5151-A

14:15-14:30

Near-Infrared to Visible light Up-conversion Device Fabricated by CuInSe₂ Quantum Dots
Xiang-Yi Chen, Hsueh-Shih Chen
 National Tsing Hua University, Taiwan

ET24-513-A

14:30-14:45

Nanoporous Polystyrene Inverse Opal Materials with Optical Interference Properties for Label-Free Biosensing
Tianze Wang, Yu Zhang, Weiping Qian
 Southeast University, China

ET24-201-A

14:45-15:00

Judd-Ofelt Analysis and Radiative Properties of Erbium-Doped Phospho-Tellurite Glasses for Efficient 1.53 μ m Laser Applications
 Kittipun Boonin, **Patarawagee Yasaka**, Wirapat Thanyaphirak, Jakrapong Kaewkhao
 Nakhon Pathom Rajabhat University, Thailand

Session Group Photo

Session 2, Room 303

Nanomaterials and Applied Catalysis

Session Chair: Prof. Wawan Hermawan, Universitas Padjadjaran, Indonesia

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-5122-A

13:00-13:15

*Preparation of Catalysts by Corrosion Engineering for Boosting Electrocatalytic Water Oxidation***Xiaohang Zheng**

Harbin Institute of Technology, China

ET24-552-A

13:15-13:30

*Modification of Iron-Based Catalysts for Dye Removal Using Fenton-Like Reaction***Plaisuda Janthabut**, Arthit Neramittagapong, Sutasinee Neramittagapong

Khon Kaen University, Thailand

ET24-403A

13:30-13:45

*Anti-Coking Ce, Y, Pr, Mg-Promoted Ni/Al₂O₃ Catalysts in the Steam Reforming of Toluene, Xylene and Butyl Acetate Mixtures***Zulqarnain**, Dong Hyuk Chun, Jiho Yoo, Soohyun Kim

Korea Institute of Energy Research, Korea

ET24-5124-A

13:45-14:00

*Nano-Oxide Modified by Tensile Strain for Boosting Superior Electrocatalytic Activities***Junlei Qi**

Harbin Institute of Technology, China

ET24-427A

14:00-14:15

*Production of Dimethyl Ether (DME) Direct Synthesis from CO₂ over Cu-Ga/Al₂O₃ based Catalysts***Uday Som**

Shizuoka University, Japan

ET24-592-A

14:15-14:30

*One-Step Recovery of Solid S₈ Products by Sulphur Electrolytic Oxidation of MoS₂ in Acidic Media***Zhongyuan Wang**, Meilan Pan, Hao Hu, Qingqing Zhou, Huadong Yuan, Yinxi Han,

Liangxu Zhou, Jiade Wang

Zhejiang University of Technology, China

ET24-210-A

14:30-14:45

*Synthesis of Silver Nanoparticles Using Pineapple Extract as a Reducing Agent***Nanthiya Hansupalak**

Kasetsart University, Thailand

ET24-426

14:45-15:00

*A Novel Hybrid Post-Hartree-Fock and Monte Carlo Algorithm for the Characterization of Conformational Isomers in Acyclic Alkanes***Ram Sivaraman**, Rishab Ghosh, Jayden Lim, Shashank Kondaveeti, Larry McMahan

Aspiring Scholars Directed Research Program, USA

Session Group Photo

Multi-functional Intelligent Materials and Nanotechnology for Wearable Devices, Energy Storage, and Biomedicine

Session Chair: Prof. Ramesh K. Agarwal, Washington University in St. Louis, USA

- *Please arrive at the room 10 minutes earlier to get the poster prepared for presentation.
- *Tape is provided onsite. Please ask the staff to have it.
- *Please stand by your poster when the participants go for your poster. Certificate will be delivered after your poster presentation and group photo is required.

P01	ET24-E05	<i>On the Impact of Process Parameters and Ambient Temperature on Tensile Strength and Fatigue Behaviour of SLS-built Polyamide-12</i> David Sommer , Ralf Hellmann University of Applied Sciences Aschaffenburg, Germany
P02	ET24-509-A	<i>Modulating Electrocatalytic Activity of Single-Atom Catalysts via CNT-Threaded MOFs: Tuning the Microscopic Coordination Environment of Central Metal Atoms for Enhanced ORR</i> YunJae Lee , Seung-Keun Park, JeongHo Na, HongGeun Oh Chung-Ang University, Republic of Korea
P03	ET24-A	<i>Exploring the Luminescence Performance of PLED with MoS₂ Nanosheet as a Hole Transport Layer</i> Yu-Cen Huang, Yung-Huang Chang, Sy-Hann Chen National Chiayi University, Taiwan
P04	ET24-5125-A	<i>Atomic-scale Platinum Infiltration into Nickel Vacancies within Dual-Deficient Nio to Enhance Electrocatalytic Hydrogen Evolution</i> Yaotian Yan Harbin Institute of Technology, China
P05	ET24-543-A	<i>Synthesis and Characterization of Fe₃O₄@SiO₂/GO for Magnetic Particle Imaging Contrast Agent and Rifampicin Delivery System</i> I Made Joni , Rovina Ruslami, Nada Syifa Qolbiyah, Camellia Panatarani Universitas Padjadjaran, Indonesia
P06	ET24-553-A	<i>Poly(lactic acid (PLA)/Halloysite Nanotube (HNT) Nanocomposites: Effects of HNT Content and Surface Modification</i> Seul-ki Yoon , No-hyung Park, Ji-ho Youk Korea Institute of Industrial Technology (KITECH), South Korea
P07	ET24-420A	<i>Poly(Ionic Liquid) Functionalization: A General Strategy for Strong, Tough, Ionic Conductive, and Multifunctional Cellulose Hydrogels toward Sensors</i> Sufeng Zhang, Zhijian Li , Guangming Li, Yan Zhang, Helin Liu, Linyue Xu Shaanxi University of Science & Technology, China
P08	ET24-408A	<i>Development and Characterization of an Optimized NO₂ Gas Sensor Based on Flavin Mononucleotide (FMN)-functionalized Carbon Nanotubes (CNT)</i> Yeong-Seok Seo , Hyun-woo Kim, Sang-Yong Ju, No-Hyung Park Korea Institute of Industrial Technology (KITECH), South Korea
P09	ET24-5163-A	<i>Resistive Switching Behavior and Structural Evolution of Spinel-Structured High Entropy Oxides for RRAM Applications</i> Jing Yuan Tsai , Wen-Wei Wu, Wei-En Ke, Ying-Hao Chu, Ping-Hung Yeh National Yang Ming Chiao Tung University, Taiwan

Poster Session 1, Room 302

13:00–15:00

Multi-functional Intelligent Materials and Nanotechnology for Wearable Devices, Energy Storage, and Biomedicine

Session Chair: Prof. Ramesh K. Agarwal, Washington University in St. Louis, USA

- Please arrive at the room 10 minutes earlier to get the poster prepared for presentation.
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P10	ET24-5165-A	<i>Understanding the Resistive Switching Behavior and Topotactic Phase Transformation in Perovskite Oxides for RRAM Applications</i> Yen-Jung Chen , Wen-Wei Wu, Chun-Chien Chiu, Jan-Chi Yang, Ping-Hung Yeh National Yang Ming Chiao Tung University, Taiwan
P11	ET24-404A	<i>A Biomimetic Upconversion Nanoreactors for Near-infrared Driven H₂ Release to Inhibit Tauopathy in Alzheimer's Disease Therapy</i> Qin Zhang , Mo Yang The Hong Kong Polytechnic University, Hong Kong, China
P12	ET24-5166-A	<i>Influence of Annealing Treatment on Optical Properties of Zn_{0.5}Ti_{0.5}NbO₄ Thin Films on Glass Substrate by Sol-Gel Method</i> Yuan-Wen Hsiao, Ching-Fang Tseng, Cheng-Hsing Hsu National United University, Taiwan
P13	ET24-514-A	<i>Interaction Analysis between the Carbodiimide-Induced Bioconjugate and Serum Protein Using Ordered Porous Layer Interferometry</i> Yu Zhang , Tianze Wang, Weiping Qian Southeast University, China
P14	ET24-562-A	<i>Formation of an Unexpected Copper(II)-Quercetin Complex Structure and the In Vitro Antidiabetic Activity Test through The Inhibition of Alpha-Amylase</i> Yusi Deawati , Puteri Khansa Salsabila, Yudha Prawira Budiman, Safri Ishmayana, Irwan Kurnia, Nova Rachmadona, Iman Permana Maksum, Bohari Mohd. Yamin Universitas Padjadjaran, Indonesia
P15	ET24-405A	<i>Novel 5(6)-Fluoro-6-(4-Alkylpiperazin-1-yl) Benzotriazoles: Synthesis, Characterization, Corrosion Inhibition, and Theoretical Calculation</i> Raid Abdel-Jalil , Amal Ibrahim, Ashraf Al-Hinai, Thuraya Al-Harthy Sultan Qaboos University, Oman
P16	ET24-590-A	<i>Surface Modification of Zirconia Substrates by Bioactive Glass Nanoparticle Coating for Enhancing Biocompatibility</i> Young-Jin Kim Daegu Catholic University, Republic of Korea
P17	ET24-540-A	<i>Luminescent Properties of Zinc Oxide Particles Prepared via Green Synthesis</i> Camellia Panatarani , Ajeng Qori Puspasari, I Made Joni Universitas Padjadjaran, Indonesia

Session 3, Room301

Energy Materials and Electrochemistry

Session Chair: Assoc. Prof. Adnan Younis, United Arab Emirates University, UAE

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-504-A	
15:15-15:30	<i>Self-Supporting and Flexible MXene/CNT Composite Film with Surface Terminations Modification for High Performance All-Solid-State Symmetric Supercapacitors</i> Ji Zhou , Meng Nie Southeast University, China
ET24-5162-A	
15:30-15:45	<i>Nano-Bio interface Engineering: Energy Conversion Between Defect-Rich SnO₂ Nanofiber and Bio-Materials</i> Ping-Hung Yeh , Chun-Yen Lai Lai, Wen-Wei Wu Tamkang University, Taiwan
ET24-5143-A	
15:45-16:00	<i>In-Situ TEM Investigation of Electro-Mechanical Interactions in LiNi_xCo_yMn_(1-x-y)O₂: Revealing Crack Propagation and Surface Degradation Mechanisms</i> Min Liu , Li Zhong, Litao Sun Southeast University, China
ET24-507-A	
16:00-16:15	<i>Research on Passivation and Packaging Technology for All-Solid-State Thin-Film Lithium-Ion Batteries</i> Fan Yue , Xiaodong Huang Southeast University, China
ET24-542-A	
16:15-16:30	<i>Effect of Oxide and Tungsten Films on Plasma Driven Hydrogen Permeation through Pd, Ni, and Steel Membranes</i> A. Kuzmin , J. Hayashi, T. Hashizuka, T. Shikama, M. Hasuo Kyoto University, Japan
ET24-508-A	
16:30-16:45	<i>Lateral Growth of Lithium Dendrite Enforced by 3D Porous Core@Shell-Cu@Li₃N Protective Layer Toward Long-Life Lithium Metal Anode</i> Zhen Li , Xiaodong Huang Southeast University, China
ET24-409A	
16:45-17:00	<i>A High-Efficiency Approach for Secure Hydrogen Storage Utilizing Colloidal Gas Aphrons Produced with Cetrimonium Bromide (CTAB)</i> Priyank Rajput , Ashok N. Bhaskarwar Indian Institute of Technology Delhi, India
ET24-5139-A	
17:00-17:15	<i>Design of Layer Structured Metal Oxide Material with Dual-Ion Defects for High-Performance Aqueous Zn-Ion Batteries</i> Yuying Li , Xinli Guo, Zhen Cao, Shaohua Wang, Qiuping Fu, Yanmei Zheng, Junnan Qu, Ruiting Li, Li Zhao, Dan Luo and Zhongwei Chen Southeast University, China
Session Group Photo	

Session 4, Room 303

Metal Processing and Analysis of Corrosion Behavior

Session chair: Prof. Raid Abdel-Jalil, Sultan Qaboos University, Oman

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-5580

15:15-15:30

*Thermal Image Monitoring of Single-Point Incremental Forming under Different Forming Condition***Chonlada Karnbanjong**, Khompee Limpadapun, Yanagon Pholruang, Jenjira Sukmanee and Ramil Kesvarakul
King Mongkut's University of Technology North Bangkok, Thailand

ET24-5814-A

15:30-15:45

*In Situ Analysis of the Effect of Twinning on Deformation and Cracking of Magnesium Alloy***Chaoqun Zhao**, Gang Fang
Tsinghua University, China

ET24-585-A

15:45-16:00

*Attaining Enhanced Strength and Consistent Ductility in High-Entropy Alloys through Dynamic-Precipitation-Accelerated Transformation-Induced Plasticity*Hee Tae Jeong and **Woo Jin Kim**
Hongik University, Republic of Korea

ET24-591-A

16:00-16:15

*Effects of Applying Plasma ARC Welding and Pulsed MIG Welding for Butt-Joint of Titanium Alloy and Stainless Steel Plates***Yi-Yin Kuo**, Hsuan-Lianng Lin
National Kaohsiung Normal University, Taiwan

ET24-5155

16:15-16:30

*Failure Analysis of Rapid Crack Propagation on CO₂ LP Flash Column***Rio Kurniawan**, Achmad Machrus, Emond Winarto, Anes Danubrata, Sri Hastuty
PT Pertamina EP, Indonesia

ET24-E01

16:30-16:45

*Evaluation of the Impact of Heat Treatment Processes and Surface Conditions on the Mechanical Properties of PBF-LB/M-built Inconel 718 Components***David Sommer**, Simon Hornung, Cemal Esen, Ralf Hellmann
University of Applied Sciences Aschaffenburg, Germany

ET24-5416

16:45-17:00

*Failure Analysis of a Corroded Steel Pipeline Transporting Methane Gas*Emond Winarto, Pradipto Sulaksono, Mahendra Prayogi, Anes Danubrata, **Sri Hastuty**
Universitas Pertamina, Indonesia

ET24-549-A

17:00-17:15

*Effect of Preparation Methods for Ceria Doping on Ni/ZSM-5 Catalysts for Enhanced D-Glucose Hydrogenation to Sorbitol***Tanabodee Leela**, Pongpanit Kongkoed, Pakpoom Athikaphan, Natthaphong Lertna, Arthit Neramittagapong, Sutasinee Neramittagapong
Khon Kaen University, Thailand

Session Group Photo

Polymer Composite Materials, Energy Materials, and Catalysts

Session Chair: Assoc. Prof. Seung-Keun Park, Chung-Ang University, South Korea

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- Tape is provided onsite. Please ask the staff to have it.
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P01	ET24-7933	<i>Morphology, Thermal Properties and Rheological Behavior of Acrylate-Styrene-Acrylonitrile-Based Composites Filled with Waste Non-Metallic Printed Circuit Boards</i> Sorasak Wongmanee, Apaipan Rattanapan, Thritima Sritapunya, Surakit Tuampoemsab, Manit Nithitanakul, Pornsri Sapsrithong King Mongkut's University of Technology North Bangkok, Thailand
P02	ET24-5560	<i>A Comparative Study on Mechanical Properties and Morphology of PP/Waste Cement Composites with using PP-g-MA as Compatibilizer and 3-Aminopropyl Triethoxysilane as Coupling Agent</i> Sorasak Wongmanee, Pornsri Sapsrithong, Surakit Tuampoemsab, Thritima Sritapunya, Jitrakha Paksamut, Apaipan Rattanapan King Mongkut's University of Technology North Bangkok, Thailand
P03	ET24-561-A	<i>Utilizing TiO₂ Photocatalysis and Natural SiO₂ Superhydrophilicity Synergy to Improve Self-Cleaning Activity in Cotton Fabric</i> Diana Rakhmawaty Eddy , Lintang Kumoro Sakti, Muhamad Diki Permana, Fellia Rizar Syahnur, M Lutfi Firdaus, Yusi Deawati, Iman Rahayu Universitas Padjadjaran, Indonesia
P04	ET24-550-A	<i>Influence of Support on Activity and Selectivity of Ru in D-glucose Hydrogenation to Sugar Alcohol</i> Pakpoom Athikaphan , Arthit Neramittagapong, Sutasinee Neramittagapong Khon Kaen University, Thailand
P05	ET24-5119-A	<i>Effect of POEs Addition and Processing Condition on Toughness Enhancement in Wood/ASA Composites</i> Daeyul Kwon , Jaeyoung Ye, Minji Choi, Youngjae Yoo Chung-Ang University, South Korea
P06	ET24-5113-A	<i>Development of a PLA-Cellulose Composite for Enhanced Passive Radiative Cooling: A Sustainable Approach to Thermal Management</i> Daeyul Kwon, Minji Choi, Youngjae Yoo, Jaeyoung Ye Chung-Ang university, Republic of Korea
P07	ET24-5615-A	<i>Modification of HDPE Membrane with Polydopamine and EVA to Improve its Hydrophilicity</i> Utari Zulfiani , Mathias Ulbricht, Saiful, Juhana Jafaar, Nurul Widiastuti Institut Teknologi Sepuluh Nopember, Indonesia
P08	ET24-501-A	<i>Synergistic Micro- and Macro-level Design of Low coordinated Co Single Atom Catalyst in Porous Carbon Nanofiber for Enhanced Lithium-Sulfur Battery</i> Jeongho Na , Seung-Keun Park Chung-Ang University, Republic of Korea
P09	ET24-5220	<i>Synthesis of Epoxidized Waste Cooking Oil as Plasticizer in the Production of Xyloglucan Chitosan Films</i> Pornsawan Assawasaengrat , Kuntida Kikaew, Warintorn Wanliphakha, Wimolpan Orachorn, Wasan Chokelarab, Pongsert Sriprom King Mongkut's Institute of Technology Ladkrabang, Thailand

Poster Session 2, Room 302

15:15–17:15

Polymer Composite Materials, Energy Materials, and Catalysts

Session Chair: Assoc. Prof. Seung-Keun Park, Chung-Ang University, South Korea

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P10	ET24-539-A	<i>Nano-Based Antifeedant : Tithonia diversifolia Leaf Extract Nanosuspension for Controlling Cabbage Pest Insect Crocidolomia pavonana Larvae</i> Wawan Hermawan , Melanie Melanie, Desak Made Malini, Mia Miranti, Madihah Madihah, Zulfa Maulidah Universitas Padjadjaran, Indonesia
P11	ET24-5169-A	<i>Viscoelastic Behavior of Arrowroot (Maranta arundinacea L.) Fiber Reinforced Starch Biocomposite Films</i> Tarique Jamal King Fahd University of Petroleum & Minerals, Saudi Arabia
P12	ET24-512-A	<i>Novel Design and Synthesis of Polyimides as Water-Soluble Binders for High Performance Silicon Anodes in Lithium-Ion Batteries</i> Minji Choi , Daeyul Kwon, Jaeyoung Ye, Youngjae Yoo Chung-Ang University, South Korea
P13	ET24-599-A	<i>Exploring Reaction Mechanism in 3D MXene/ZnTe@NC Microspheres for Potassium-Ion Batteries</i> Hong Geun Oh , Seung-Keun Park Chung-Ang University, Republic of Korea
P14	ET24-503-A	<i>Activating Disordered Zn²⁺ Intercalation Chemistry via Structural Engineering for Long-Life Aqueous Zinc/Alpha-Manganese Oxide Batteries</i> Fuhan Cui , Chongyang Zhu, Litao Sun Southeast University, China
P15	ET24-578-A	<i>Basic Study on Heat Transfer Analysis of Materials for PVT Considering Driving Conditions</i> Eulyong Ha , Jaewoong Kim Korean Institute of Industrial Technology, Korea
P16	ET24-589-A	<i>Photovoltaic Performance of Hybrid Solar Cells with V₂CTx MXene/Graphene-mixed Catalyst Layers</i> Miran Kim, Younghwan Kwon , Yoon Soo Han Daegu University, Republic of Korea; Daegu Catholic University, Republic of Korea

Session 5, Room 211

Biomedical Materials and Biochemical Engineering

Session chair: Prof. Junlei Qi, Harbin Institute of Technology, China

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-205-A	
10:00-10:15	<i>Synthesis and Characterization of Folic Acid-Pegylated Holmium Nanoparticles for Targeted Magnetic Resonance Imaging Agent</i> Retna Putri Fauzia , Ayu Jelita Sinambela, Zahra Afriani, Santhy Wyantuti, Husein H. Bahti Padjadjaran University, Indonesia
ET24-406	
10:15-10:30	<i>Biodegradable Drug-eluting Scleral Buckle Implant</i> Sabina I. Wilkanowicz , Cagri G. Besirli Warsaw University of Technology, Poland
ET24-563-A	
10:30-10:45	<i>In-depth Investigation of The Bioactivity of CO₃Ap Scaffolds Created from Negative Charged-CaCO₃ Via Fine Bubble Diffuser for Bone Tissue Engineering</i> Renny Febrida , Yanwar Faza, Ellyza Herda, Arief Cahyanto, I Made Joni Universitas Padjadjaran, Indonesia
ET24-5135	
10:45-11:00	<i>Ibuprofen-loaded PEGDMA/CNS Nanocomposite Hydrogels: A Drug Release Study</i> Rohit Concepcion Tilwani , Persia Ada N. de Yro Mapua University, Philippines
ET24-541-A	
11:00-11:15	<i>Protease and Lipase Enzyme Activity of Probiotic Yogurt Powder in Improving Protein and Lipid Profile of Chicken Egg Yolk</i> Lovita Andriani , Jacob Managam Situmeang, Ari Firmansyah, I Made Joni, Camellia Panatarani Universitas Padjadjaran, Indonesia
ET24-5642	
11:15-11:30	<i>A Kinetic Study on Starch Digestibility and Polyphenol Release of Different Physically Modified Riceberry Flours during in Vitro Stimulated Gastrointestinal Digestion</i> Ngo Van Tai , Naphatrapi Luangsakul King Mongkut's Institute of Technology Ladkrabang, Thailand
ET24-538-A	
11:30-11:45	<i>Optimizing Antifeedant Delivery with Modified Chitosan and Tween 80 as Dispersing Agent of Lantana camara L. Leaf Extract Suspension</i> Melanie Melanie , Wawan Hermawan, Desak Made Malini, Mia Miranti, Madihah Madihah, Risma Arsysta, Keukeu Kaniawati Rosada, Ferry Faizal Universitas Padjadjaran, Indonesia
ET24-546-A	
11:45-12:00	<i>The Improvement Haematological Performance of Red Tilapia Juvenile and Its Impact to Production Through Technology Ultrafine Bubbles In Recirculating Aquaculture System</i> Ujang Subhan , Isni Nuruhwati, Atikah Nurhayati, Roffi Grandiosa Herman, Isni Meisani, Shorim Abdul Matiin, Camellia Panatarani, I Made Joni Universitas Padjadjaran, Indonesia
Best Presentation Announcement and Session Group Photo	

Session 6, Room 207

Polymer Chemistry and Waste Resource Utilization

Session chair: Prof. Hsuan-Liang Lin, National Kaohsiung Normal University, Taiwan

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-5144	
10:00-10:15	Economic Assessment of Tamarind Kernel Powder Edible Film Production Suchata Kirdponpattara , Anon Phumkacha, Thanawadee Leejarkpai, Santi Chueter King Mongkut's University of Technology North Bangkok, Thailand
ET24-5021	
10:15-10:30	Cleaner Bio-Based Plasticizer Synthesis from Waste Cooking Oil to Substitute Toxic Diethyl Phthalate in PVC film Chompoonut Chaiyaraksa, Pongsert Sriprom , Fahana Boonkaen, Arthittaya Laemsri, Arnita Smingkaew, Wasan Chokelab, Pornsawan Assawaseangrat King Mongkut's Institute of Technology Ladkrabang, Thailand
ET24-5117-A	
10:30-10:45	Evaluation of PMVEMA-ES as an Adhesion Promoter for PMMA-Based Organic Coatings Shameer Hisham , Nur Zarith Diana Zakaria, Hairul Anuar Tajuddin, Norazilawati Muhamad Sarih, Zul Hazrin Zainal Abidin Universiti Malaya, Malaysia
ET24-559-A	
10:45-11:00	Improvement of Mechanical and Filtration Performance of Cellulose Acetate Membranes with the Addition of Silica from Rice Husk Ash Senny Widyaningsih , Irmanto Irmanto, Febriana Nur Islamay, Tirafida Irzhanty, Joddy Arya Laksmono, Iman Rahayu, Diana Rakhmawaty Eddy, Universitas Jenderal Soedirman, Indonesia
ET24-537-A	
11:00-11:15	Fuel Characteristics of Fusion Hydrochar Derived from Co-Hydrothermal Carbonization of Maize Stover and Waste Polystyrene Packaging Napat Kaewtrakulchai , Monthakan Chanthip, Praifah Sunprasit, Sirayu Chanpee, Masayoshi Fuji, Apiluck Eiadua King Mongkut's Institute of Technology Ladkrabang, Thailand
ET24-5137-A	
11:15-11:30	Activation Process Development of Sustainable Adsorbent Materials from Alumina Dross Chun-Liang Chen , To-Mei Wang, Yu-Ren Chen, Sheng-Fu Yang, Chien-Lung Liang National Atomic Research Institute, Taiwan
ET24-518	
11:30-11:45	Optimized Adsorption of Aqueous Cu (II) Ions Using Novel Microwave-Extracted Sodium Alginate from Brown Seaweed (<i>Sargassum Sp.</i>) Grace Javier Lainez , Anna Marie Agtay Umali, Ma. Glaiza Mae Mendoza Casalme, Anita Paña Aquino, Mae Deleniana Virtus, Ian Deniell Salazar Magsino Batangas State University, Philippines
ET24-3505	
11:45-12:00	Physical and Functional Properties of Spent Coffee Ground after Various Drying Techniques Nur Maiyah, Yatima Auenchitr, Suriyan Supapvanich, Arpassorn Sirijariyawat, Pajaree Inkasupart, Natthaporn Chotigavin, Soraya Kerdpi boon King Mongkut's Institute of Technology Ladkrabang, Thailand
Best Presentation Announcement and Session Group Photo	

Session 7, Room 211

Performance Evaluation of Building Materials and Structures

Session Chair: Asst. Prof. Sabina I. Wilkanowicz, Warsaw University of Technology, Poland

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-202-A

13:30-13:45 *Mechanical Properties of Rubberwood Fly Ash Based Geopolymer Concrete*
Tavorn Kuasakul, Cherdsak Suksiripattanapong, Nattiya Wonglakorn, Wisitsak Tabyang
 Rajamangala University of Technology Isan, Thailand

ET24-5133

13:45-14:00 *The Impact of Sulphate Erosion Formation Products on the Pore Structure of Cementitious Materials during Dry and Wet Cycling Based on Thermodynamic Simulations*
 Yong Wen, **Lina Zhou**, Lixiao Wang
 Xinjiang University, China

ET24-5141-A

14:00-14:15 *Utilization and Assessment of Copper Mine Tailings as Precursors in KOH-activated Geopolymer Mortars*
 Dionella Jitka B. Quinagoran, James Albert B Narvaez, **Eduardo Jr. R Magdaluyo**, Karlo Leandro D Baladad
 University of the Philippines - Diliman Campus, Philippines

ET24-7205

14:15-14:30 *Evaluating the Performance of Buoyancy Fiber-Reinforced Floating Concrete with Recycled LECA*
Ming Kun Yew, Ming Chian Yew, Jing Han Beh, Jin Chai Lee, Foo Wei Lee, Siong Kang Lim, Jee Hock Lim, Cengiz Duran Atiş
 Universiti Tunku Abdul Rahman, Malaysia

ET24-2805

14:30-14:45 *3D Printed Connection System For Bamboo Structure Construction*
 John Denver Catapang, **Abigail Cruz Catapang**, Rigoberto Advincula, John Ryan Dizon, Sam Olarte-Lopez, Francis John Baltazar, Jhon Carlo Crisostomo, John Dave De Guzman, Marjorie Custodio, Andrea Cuaderno
 Bataan Peninsula State University, Philippines

ET24-5120

14:45-15:00 *Wood Tar as a Waterproofing Agent for Concrete: a Sustainable Approach for Building Construction*
 Joao Pedro Almeida Lopes, **Hebert Luis Rossetto**
 Federal University of Pelotas - UFPel, Brazil

Best Presentation Announcement and Session Group Photo

Session 8, Room 207

Additive Manufacturing and Precision Processing

Session chair: Dr. Arseniy Kuzmin, Kyoto University, Japan

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-5118

13:30-13:45

*Optimization of Strength & Roughness for Vapor Smoothened FDM fabricated PLA parts through Exposure Time & Temperature*Charles Edward Lopez Alviar, **Blessie Ambata Basilia**
Mapua University, Philippines

ET24-5121

13:45-14:00

*The Study and Development of the Effect of Improving Surface Smoothness in 3D Printed ABS Material by Temperature and Acetone Vapor***Theerawat Phunthaweewuthinon**, Ramil Kesvarakul
King Mongkut's University of Technology North Bangkok, Thailand

ET24-5087

14:00-14:15

*Material Handling in Wafer Dicing Processing using Digital Twin Technology*Lai-Chung Lee, Shou-Yen Zhao, **Whei-Jane Wei**
Minghsin University of Science and Technology, Taiwan

ET24-E201

14:15-14:30

*Characterization of Cellulose Nanocrystals (CNC) and Its Reinforcing Impact as an Additive for PLA TPU 3D Printing Filament***Paul Eric C. Maglalang**, Persia Ada De Yro, Araceli M. Monsada, Blessie A. Basilia
Mapua University, Philippines

ET24-5132-A

14:30-14:45

*Study on Nanosecond UV Pulsed Laser Direct Writing of Silicon Microstructure***Songxiang Ji**, Chunyan Yin, Guangbin Dou, Litao Sun
Southeast University, China

ET24-551

14:45-15:00

*Design and Construction of Detachable Traverse System for Small Scaled Quasi Atmospheric Boundary Layer Wind Tunnel*Kamil Khalili Haji Abdullah, **Nurizzatul Atikha Rahmat**, A. R. P. Yusrizal, M. A. S. Harozi, and K. I. Mustafar, Nor Atiqah Zolpakar
Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia

ET24-5164-A

15:00-15:15

*Photoaging Behavior of Low-Cd Alloyed Quantum Dots under Blue Light Irradiation***Jing En Gan**, Hsueh Shih Chen
National Tsing Hua University, Taiwan

Best Presentation Announcement and Session Group Photo

Session 9, Room 211

Multi-functional Intelligent Materials and Nanotechnology for Wearable Devices, Energy Storage, and Biomedicine

Session Chair: Dr. Yaotian Yan, Harbin Institute of Technology, China
Assoc. Prof. Xiaohang Zheng, Harbin Institute of Technology, China

- Please arrive at the room 10 minutes earlier.
- Copy the presentation file to the computer.
- Attend the whole session and join the session group photo.

ET24-597-A

15:15-15:30

A Wearable Energy-Storage Sensing System Enabled by V₂O₅/MXene Flexible Film
Guoju Zhang, Kuibo Yin
Southeast University, China

ET24-510-A

15:30-15:45

Continuous preparation of Highly Robust Conductive Fibers with Heterogeneous Hierarchical Structure for Multifunctional Applications
Jiaxin Shen, Hengchang Bi, Litao Sun
Southeast University, China

ET24-505-A

15:45-16:00

Bio-inspired Fluorescent Core-Shell Structure and Derived Programmable Hydrogels for Advanced Information Encryption
Huihui Shi, Kuibo Yin, Meng Nie
Southeast University, China

ET24-594-A

16:00-16:15

Growth of millimeter-sized 2D Metal Iodide Crystals Induced by Ion-Specific Preference at Water-Air Interfaces
Jingxian Zhong
Southeast University, China

ET24-506-A

16:15-16:30

Flexible Metallosupramolecular Eutectogels with Self-Healing Properties for Compliant Soft Electronics
Lin Zhu, Kuibo Yin
Southeast University, China

ET24-530

16:30-16:45

Evaluation of Tensile Behavior of 3D-Printed Fiberglass-Reinforced Nylon Composites
Madelene Velasco Villablanca, Brian Jumaquio Tuazon, John Ryan Cortez Dizon, Dan Erick Pantig Dominguez, Dr. Arman Ray N. Nisay
Bataan Peninsula State University, Philippines

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Online Session

UTC+9, Japan Time

<https://us02web.zoom.us/j/83104318451>

Please arrive at the room 10 minutes earlier.
Please copy the presentation file to the computer.
Please attend the whole session and join the session group photo.
The best presentation winner will be announced at the end.

ET24-5260

10:00-10:15

Hybridization of Date Palm and Glass Fibers in Bulk Molding Compounds for Pedestrian Network Applications

Nimrod Osanga, Mohsen Hassan, Hassan Shokry, Wael Khair-Eldeen
Egypt-Japan University of Science and Technology, Egypt

ET24-5140

10:15-10:30

Effect of Heat Treatments on the Microstructural Stability of New $Fe_{35}Cr_{35}Ni_{10}Ti_{10}Zr_{10}$ Medium Entropy Alloy

Annexin Sam, Mohsen Ghali, Mohamed Abdel-Hady Gepreel
Egypt-Japan University of Science and Technology, Egypt

ET24-7050

10:30-10:45

A Comparative Analysis of Zn^{2+} Adsorption from Simulated Mining Wastewater using Unmodified and NaClO-modified Sugarcane Bagasse-Derived Biochar

Tristan Roy Laqui Panaligan, Jesuniño Aquino, Joshua Daniele Francia, Airamaebel Almario, Irish Anne Mendoza
Mapúa Malayan Colleges Laguna, Philippines

ET24-511

10:45-11:00

Wet Spinning of Optimized Graphene Oxide Nanosheets for Enhanced Electrochemical Performance in Fiber-Based Supercapacitors

Chriss Connex Muhuwa, Mohamed Mokhtar Mohamed, Mathias Ulbricht, Ahmed Saad Khalil
Egypt-Japan University of Science and Technology, Egypt

ET24-5136

11:00-11:15

Electrochemical Performance of Hydrothermal Synthesized Fe_3O_4/ReS_2 Heterostructure for Supercapacitor Electrodes

Mohamed A.A. Eldaly, Mohsen A. Hassan, Guoqing Guan, Ahmed S.G. Khalil
Egypt-Japan University of Science and Technology, Egypt

Online Session

UTC+9, Japan Time

ET24-595	
11:15-11:30	<i>Significant Study on LIG Supercapacitor Electrode Performance in Different Aqueous Electrolytes</i> Solomon A. Mensah , Ahmed M.R. Fath El-Bab, Yoichi Tominaga, Ahmed Saad Goma Khalil Egypt-Japan University of Science and Technology, Egypt
ET24-5130	
11:30-11:45	<i>One-pot Synthesis of Blue Fluorescent Carbon Quantum Dots Derived from Simmondsia Chinensis Seed Meal</i> Wuoi Samuel Mabior , Hesham Soliman, Mohsen Ghali Egypt-Japan University of Science and Technology, Egypt
ET24-560	
11:45-12:00	<i>Structural and Magnetic Properties of Synthesis-Dependent Cadmium-doped Manganite Nanopowders</i> Danyang Su , Nikita Liedienov, Yurii Dzhezherya, Victor Kalita, Igor Fesych, Andrey Bodnaruk, Sergiy Reshetnyak, Aleksey Pashchenko, Georgiy Levchenko Jilin University, China
ET24-1285	
12:00-12:15	<i>Synthesis of Carbon Quantum Dots from Corn silk</i> Dina Abdelmonsef , Sherif Hammad, and Mohsen Ghali Egypt-Japan University of Science and Technology, Egypt
	Best Presentation Announcement and Session Group Photo

Delegate

Delegate	Affiliation
Hsuan-Lianng Lin	National Kaohsiung Normal University, Taiwan
Jitrakha Paksamut	King Mongkut's University of Technology North Bangkok, Thailand
Yong Wen	Xinjiang University, Urumqi, China
Lixiao Wang	Xinjiang University, Urumqi, China
Seung-Keun Park	Chung-Ang University, Republic of Korea
Emond Winarto	PT Pertamina EP, Indonesia
Mahendra Prayogi	PT Pertamina EP, Indonesia
Achmad Machrus	PT Pertamina EP, Indonesia
Anes Danubrata	PT Pertamina EP, Indonesia
Pradipto Sulaksono	PT Pertamina EP, Indonesia
Guangming Li	Shaanxi University of Science & Technology, China
Yan Zhang	Shaanxi University of Science & Technology, China
Helin Liu	Shaanxi University of Science & Technology, China
Linyue Xu	Shaanxi University of Science & Technology, China

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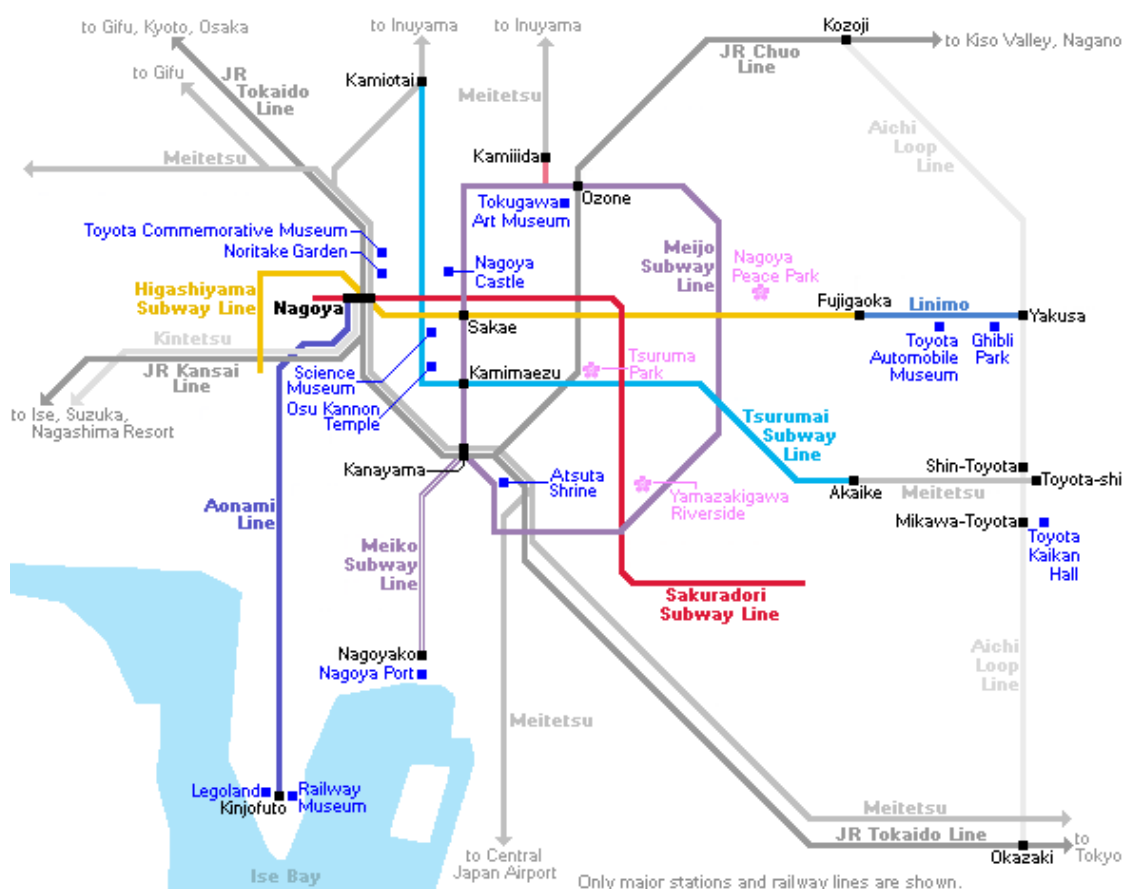
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Nagoya Attractions



Railway Museum SCMAGLEV and Railway Park

The SCMAGLEV and Railway Park is the railway museum of Central Japan Railways (JR Central).
Hours and Fee:
10:00-17:30
Admission:
1000 Yen



Korankei-Sanshu Asuke Yashiki Village

Hours: 9:00 to 17:00 (entry until 16:30)

Closed: Thursdays (or following day if Thursday is a national holiday) except during Golden Week and the month of November; December 25 to January 2

Admission: 300 yen



Korankei (香嵐渓, Kōrankei) is a valley near [Nagoya](#) reputed to be one of the best spots for [autumn colors](#) in the [Chubu Region](#). The peak of the season usually takes place around mid to late November each year. The best colors tend to appear around the paths along Tomoe River at the western and southern sides of Mount Imori. Getting to Korankei is time consuming and not straightforward due to the lack of direct public transportation. From Nagoya Station, at least one transfer involving trains and buses is required to reach Korankei. The one way journey costs about 1500-2000 yen and takes just under two hours with good connections. Visitors are advised to come early in the day to avoid traffic jams.

Tokugawa Art Museum

Displaying the former feudal lords' treasures

Next to the museum is **Tokugawa-en**, a beautiful Japanese landscape garden with a large pond at its center.

Hours: 10:00-17:00

Closed: Mondays

Admission: 1600 Yen (Musuem Only)
 1750 Yen(Museum and Garden)



Nagoya Castle

Nagoya Castle (名古屋城, Nagoyajō) was built in the beginning of the Edo Period (1603-1868) as the seat of one of the three branches of the ruling Tokugawa family, the Owari branch.

Hours: 9:00 to 16:30 (entry to buildings ends at 16:00)

Closed: December 29 to January 1

Admission: 500 Yen

Toyota Kaikan Museum

Hours: 09:30-17:00

Closed: Sundays and during the New Year, Golden Week and Obon holidays

Admission: Free

Toyota Commemorative Museum of Industry and Technology

Hours: 09:30-17:00 (entry until 16:30)

Closed: Mondays (or the following day if Monday is a national holiday) and New Year holidays

Admission: 1000 Yen

Toyota Automobile Museum

Hours: 09:30-17:00 (entry until 16:30)

Closed: Mondays (or the following day if Monday is a national holiday) and New Year holidays

Admission: 1200 Yen

