

Theme:

“Shaping the future through expertise and innovations in Materials Science and Engineering”

Venue

Park Hotel Hong Kong, Chatham Rd S, TsimShaTsui, Hong Kong



8th world Congress on
**MATERIALS SCIENCE
AND ENGINEERING**

November 08-09, 2024 | Hong Kong

Mat Science 2024

<https://materialsscience.mindauthors.com/>

SCIENTIFIC AGENDA

DAY-1

November 8, 2024

In-person Conference

Day 1

09:00 - 09:30 **Onsite Registration & Seating Arrangement**

09:30 - 09:45 **Introduction & Opening Ceremony**

Plenary Talk

09:45 - 10:15 **Title: The rational experimental-computational correlation (Recc) – reliability improvement toolkit for materials technologies in aerospace design**

Prof. Alexander Korsunsky, Trinity College, UK

Keynote Presentations

10:15 - 10:40 **Title: Transfer-free robust n-type graphene Field-effect transistors with high on/off ratio and mobility**

Prof. Soon-Gil Yoon, Chungnam National University, Korea

10:40 - 11:05 **Title: A study on the causal association of environmental pollution and health in national industrial complexes in Korea**

Prof. KilYong Choi, Anyang University, Korea

11:05 - 11:30 **Title: Exploring the Magnetic and Optical Properties of Dilute Magnetic Semiconductors: Doping and Synthesis Perspectives in Zinc Oxide Materials**

Prof Leelakrishna Reddy, University of Johannesburg, South Africa

Refreshment & Coffee - 11:30 - 11:50

Oral Presentations

11:50 - 12:10 **Title: Experimental tests of thermo-mechanical effect on buckling behaviour of thin-walled composite Z-shaped columns in asymmetrical configurations**

Prof. Katarzyna Falkowicz, Lublin University of Technology, Poland

12:10 - 12:30 **Title: High-performance room-temperature NO₂ gas sensors via advanced surface engineering**

Prof. Bei Bei Wang, Fudan University, China

12:30 - 12:50 **Title: Effect of coherent nanoprecipitate on strain hardening of Al alloys: breaking through the strength-ductility trade-off**

Dr. Pan Wu, Northwestern Polytechnical University, China

12:50 - 13:10 **Title: Multiscale thermo-kinetic characterization for β' and $\beta 1$ precipitation in mg-sm alloys**

Dr. Tianle Wang, Northwestern Polytechnical University, China

13:10 - 13:30 **Title: Formation of heterogeneous interfaces in the TiAl/Ti₂AlNb layered composite and its effect on the fracture toughness**

Dr. Wei Beibei, Northwestern Polytechnical University, China

Memorable Group Photo & Tempting Buffet lunch - 13:30 - 14:15

Oral Presentations Cont...

14:15 - 14:35

Title: Microstructure evolution and its effect on mechanical properties in an electron beam welded β -solidified TiAl alloy

Mr. Songkuan Zhao, Northwestern Polytechnical University, China

14:35 - 14:55

Title: Formation of core-shell-like structure in β -solidified TiAl alloy and its effect on hot workability

Dr. Yonghao Yu, Northwestern Polytechnical University, China

14:55 - 15:15

Title: Biomimetic recovery of deep carious dentin through reconstruction of preformed mineralization micro-environment mediated by glycopeptide hydrogel

Mr. Zhongcheng Li, Sichuan University, China

Group Presentation Cont...

15:15 - 15:55

Title: Smart materials and structures: from 3D to 4D printing

Prof. Daining Fang & Dr. Zeang Zhao, Beijing Institute of Technology, China

Refreshment & Coffee - 15:55 - 16:15

Oral Presentations Cont...

16:15 -16:35

Title: Natural infrared light source for complex signal generation and applications

Dr. Wen Shang, Shanghai Jiao Tong University, China

16:35 - 16:55

Title: Unique features of quantum dot-based artificial graphene on Si substrates

Dr. Zhenyang Zhong, Fudan University, China

***** End of Day 1 *****

SCIENTIFIC AGENDA

DAY-2

November 9, 2024

In-person Conference

Day 2

09:00 - 09:30	Onsite Registration & Seating Arrangement
Keynote Presentations	
09:30 - 09:55	Title: Microbial plastic factory for tailor-made production of biodegradable polylactide modifiers Prof. Seiichi Taguchi , Engineering Biology Research Center Kobe University, Japan
09:55 - 10:20	Title: Concept of embedded dipole in surface and interface engineering Prof. Michael Zharnikov , Heidelberg University, Germany
10:20 - 10:45	Title: Mean-time-to-failure equations in microelectronic devices based on entropy production Prof. TU King Ning , City University of Hong Kong, Hong Kong
10:45 - 11:10	Title: Engineered stretchable substrate for niche applications Dr. Cheng-Yao Lo , National Tsing Hua University, Taiwan
Refreshment & Coffee - 11:10 - 11:30	
Oral Presentations	
11:30 - 11:50	Title: Enhanced cryogenic properties of thermoplastic elastomer composites for marine applications: A focus on cold resistance and mechanical integrity Dr. Jin-Woo Lee , Korea Institute of Materials Convergence Technology, Korea
11:50 - 12:10	Title: Evaluating the degree of endothelium dysfunction associated with cardiovascular Prof. Febee R Y Louka , University of Louisiana at Lafayette, USA
12:10 - 12:30	Title: Soul over matter information system with tao transformative field Dr. Laure Le Coroller , & Dr. Master Sha Tao Academy, Canada
12:30 - 12:50	Title: Porous silicon as a multimodal platform for nanomedicine Prof. Nicola Daldosso , University of Verona, Italy
12:50 - 13:10	Title: Discovery of new anti-tubulin agents and their nanoparticle delivery for drug-resistant cancer Dr. Wei Li , University of Tennessee Health Science Center, USA
Memorable Group Photo & Tempting Buffet Lunch - 13:10 - 13:55	
Oral Presentations Cont...	
13:55 - 14:15	Title: Improving effect of dietary kefir supplementation on the lipid peroxidation antioxidants levels in the blood of rabbits fed on a high-cholesterol diet Prof. Aysel Guven , Baskent University, Turkey
14:15 - 14:35	Title: Exopolysaccharide-based hydrogel/AgNPs nanocomposite exhibits superior antitumor activity in breast cancer Prof. Ulviye Bunyatova , Baskent University, Turkey

14:35 - 14:55

Title: Rational design of novel selenium nanosystems for triple-negative breast cancer treatment

Prof. Wong Ka-hing, The Hong Kong Polytechnic University, Hong Kong

Group Presentations

14:55 - 15:35

Title: Plant-derived Nanovesicles as vector for bioactive molecules

Prof. Gianfranco Peluso & Dr Rita Paola Debri, Unicamillus International Medical University, Italy

Refreshment & Coffee - 15:35 - 15:55

Oral Presentations cont...

15:55 - 16:15

Title: An antibiotic-free platform for eliminating persistent *Helicobacter pylori* infection without disrupting gut microbiota

Prof. Jie Gao, Naval Medical University, China

16:15 - 16:35

Title: Recent advances in phase change materials and their application in Li-batteries

Dr. Ghulam Rasool, Prince Mohammad Bin Fahd University, KSA

Poster Presentations - 16:35 - 17:20

16:35 - 17:20

Title: The effect of the central hole on the stability of the compressed plate made of CFRP

Prof. Wysmulski Paweł, Lublin University of Technology, Poland

Title: Stability investigations of compressed thin-walled composite columns with various closed cross-sections

Prof. Debski Hubert & Prof. Patryk Rozylo, Lublin Technology of University, Poland

Title: Enhanced Tetracycline degradation in saline water via Peroxydisulfate activation using *Gracilaria Verrucosa*-derived biochar as a novel P/S-C catalyst

Dr. Soohyun Bae & Prof. Won Sik Shin, Kyungpook National University, Korea

Title: Stabilization of sediment contaminated with heavy metals using biochar composites

Dr. Nguyen Chi Cuong, Kyungpook National University, Korea

Poster Evaluation and Best Poster Awards - 17:20 - 17:35

*****End of the Conference*****



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