

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 β_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: 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 Corroller, & *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 Pawel, *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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