

ORGANIZED BY



GLOBAL SUMMIT ON  
**ADVANCED MATERIALS  
SCIENCE AND  
NANOTECHNOLOGY**

22-23  
NOV 2024



# SCIENTIFIC PROGRAM



GLOBAL SUMMIT ON  
**ADVANCED MATERIALS SCIENCE AND  
NANOTECHNOLOGY**UAE (DUBAI TIME)  
10:00 - 18:15

REGISTRATIONS 09:00-09:30

OPENING REMARKS 09:30-10:00

KEYNOTE FORUM

10:00-10:30 **Rotational Seismology Achievements from an Instrumentation Point of View – How precise is precise enough?**

Anna Kurzych, Military University of Technology, Poland

10:30-11:00 **Understanding and optimizing alternant and non-alternant nanographenes for spintronic and optoelectronic applications**

Aristides D. Zdetsis, University of Patras, Greece

11:00-11:30 **Application of Optical Laser System for Health Monitoring of Engineering structures**

Faez Masurkar, The British University in Dubai, UAE

GROUP PHOTO - REFRESHMENT BREAK (11:30 - 11:45)

TECHNICAL SESSION-I

11:45-12:10 **Influence of Tool Geometry on Material Flow, Temperature Evolution, and Mechanical Properties in the Friction Stir Welding of AA6082**

Aleksandra Mirowska, Gdansk University of Technology, Poland

12:10-12:35 **Mechanical Performance of the Carbon-Fiber-Reinforced Polyetheretherketone (CF/PEKK) composite**

Kim Yun-Hae, National Korea Maritime and Ocean University, South Korea

12:35-13:00 **Naturally formed iron oxide nanoparticles surpassing chemically synthesized counterpart: Toxicity studies**

Rajeev Kumar, Panjab University, India

LUNCH @ RESTAURANT (13:00-14:00)

POSTER VIEWING (14:00-14:30)

Poster - 1 **Tunable pseudocapacitance of electrospun carbon/iron-vanadium oxide nanofibers for high-energy-density flexible supercapacitors**

Jiwon Jang, Korea University, South-Korea

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Poster - 2 **SrTiO<sub>3</sub> nanocubes and PVDF film deposited by supersonic spraying for energy-harvesting nanogenerators**  
Jungwoo Huh, Korea University, South Korea

Poster - 3 **nanogenerator fabrication: Augmenting electroactive  $\beta$ - and  $\gamma$ - phases of PVDF with supersonically sprayed Sr<sub>2</sub>SnO<sub>4</sub> nanorods**  
Woojin Lim, Korea University, South Korea

Poster - 4 **High-Performance Thermoelectric Generators Utilizing Nanostructured Cu<sub>2</sub>Se<sub>0.96</sub>Te<sub>0.04-x</sub>Ix/Cu<sub>2</sub>O Composites: An Investigation of Output Characteristics for Waste Heat Conversion**  
Vinothkumar Lourdhusamy, National Changhua University of Education, Changhua, Taiwan

Poster - 5 **Green Route Synthesis for ZnO Nanoparticles Using Functionalized Natural Fiber for Wastewater Treatment**  
Gautam Madhok, Panjab University, India

REFRESHMENT BREAK 14:30-14:50

KEYNOTE FORUM

14:50-15:20 **Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: safety, effectiveness and durability in Long-Term Follow-Up in 40 Patients**  
Gianluigi Patelli, ASST Bergamo Est company, Italy

KEYNOTE FORUM

15:20-15:45 **Analysis of Tensile Behavior After Impact in Low Temperature Environmental Conditions for Self-reinforced PET Composites**  
Kim Se-yoon, Composites Solutions Co.,Ltd, South Korea

15:45-16:10 **Optical characteristics of polymer and nanocomposite films**  
Stefka N. Kasarova and Nina G. Sultanova, Assen Zlatarov University, Bulgaria

16:10-16:35 **Improving Adhesion Properties in CF/PEKK Composites: Effects of HNT-Modified PEI Adhesive on Surface Energy and polarity**  
Kang Min Kim, National Korea Maritime and Ocean University, South Korea

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- 16:35-17:00** **Transforming Education Sustainability through AI-Driven Risk Management**  
Samar Mouti, Liwa College, UAE
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- 17:00-17:25** **Optimization of Bonding Performance in CF/Epoxy Composites through Nanoparticle-Reinforced adhesive**  
Bang Tae-Sun, National Korea Maritime and Ocean University, South Korea
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- 17:25-17:50** **Applications of Polymeric Fluids in Upstream Oil and Gas Operations: Challenges and Recent Advances**  
Musaab Magzoub Elhag, UAE University, UAE
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- 17:50-18:15** **Polylactic Acid-based materials: a journey over the potential versatility of biobased polymers**  
Marco Aldo Ortenzi, University of Milan, Italy

PANEL DISCUSSIONS

END OF DAY 1

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## TECHNICAL SESSION-III

**10:00-10:30** **New attempt to suppress scattering effect in trans-body imaging of animal bodies**  
Koichi Shimizu, Waseda University, Japan

**10:30-10:55** **Mathieu-type nonlinear responses of the resonantly excited micro-cantilever to viscous loads for varying elastic stiffness and quality factors**  
Cagri Yilmaz, Akdeniz University, Turkey

**10:55-11:20** **The Influence Of Ict Over Sustainable Development: A Fresh Approach**  
Daniel Balsalobre Lorente, University of Castilla-La Mancha, Spain

## BREAK 11:20-11:30

**11:30-12:00** **Structural control and structural analysis of carbon materials**  
Yasuhiro Yamada, Chiba University, Japan

**12:00-12:30** **Mechanical Behavior of Ramie and Flax Hybrid Natural Fiber Composites: An Evaluation Across Different Conditions**  
Sivasubramanian Palanisamy, PTR College of Engineering and Technology, India

**12:30-13:00** **A powerful analytical tool for geosciences and environmental systems: Handheld Laser-Induced Breakdown Spectroscopy**  
Giorgio Saverio Senesi, Institute of Plasma Science and Technology, Italy

## LUNCH 13:00-14:00

## TECHNICAL SESSION-IV

**14:00-14:25** **Visible-Light Active CQDs/TiO<sub>2</sub> Nanocomposite for Dye Degradation**  
Qurtulen, Aligarh Muslim University, India

**14:25-14:50** **Memory Characteristics and Crystallographic Transformations in Shape Memory Alloys**  
Osman Adiguzel, Firat University, Turkey

**14:50-15:15** **Magnetite nanoparticles coated with cardanol derivatives for petroleum crude oil clean-up**  
Hamada A.Al-Lohedan, King University, Saudi Arabia

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**15:15-15:40**      **Econazole topical gel: development and characterization**  
Mohammad Bayan, Philadelphia university, Jordan

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**15:40-16:05**      **Phenols & saliva effect on virgin olive oil aroma release: a chemical and sensory approach**  
Enrique J Diaz-Montana, University of Seville, Spain

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BREAK 16:05-16:20

**16:20-16:45**      **Cycloterpenal synthesis , biosynthesis and their biological actions**  
Coran M.H.Watanabe, Texas A&M University, USA

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**16:45-17:10**      **Exceptional and Diabolic Point Sensors**  
Jyoti Sheoran, Pennsylvania State University, USA

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**17:10-17:35**      **Image-base technology vs diagnostic lenses for scleral lens fitting for keratoconus: Efficiency of the fitting process**  
Cherie B. Nau, Mayo Clinic, Rochester, MN, USA

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END OF DAY 2