



In-Person Conference

Program-At-A-Glance

Peers Alley Media


1126 59 Ave East, V5X 1Y9

Vancouver BC, Canada



Peers Alley Media

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6th Edition of

ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 21-22, 2024
Amsterdam, Netherlands

SCIENTIFIC PROGRAM

ADV. MATERIALS SCIENCE 2024

<https://advanced-materialsscience.peersalleyconferences.com/>

DAY 1

MARCH 21, 2024

Scientific Program

08:30-09:00 Registrations

09:00-09:15 Opening Ceremony

Moderator: Philippe Baranek, EDF Lab Paris-Saclay, France

Topics: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis

Distinguished Speaker Talks

Session Chair Philippe Baranek, EDF Lab Paris-Saclay, France

Session Chair Amlan K. Roy, Indian Institute of Science Education and Research Kolkata, India

09:15-09:35

Title: Damage growth in new Mg-based lightweight multi-component Mg-10Li-9Al-6Zn-4Si alloy caused by cavitation erosion

Alicja Krystyna Krella, Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Poland

09:35-09:55

Title: Computational studies on the chitosan nanoparticle as potential carriers in drug delivery systems for isoniazid drug

Mobina Abdoli Azim, Islamic Azad University, Iran

09:55-10:15

Title: Towards a stable perovskite: Insights from theory

Philippe Baranek, EDF Lab Paris-Saclay, France

10:15-10:35

Title: Therapeutic effects of plasma-synthesized polypyrrole biopolymer shown in rats with spinal cord injury are similar to those obtained in non-human primate

Hermelinda Salgado-Ceballos, Instituto Mexicano del Seguro Social (IMSS), Mexico

Group Photo 10:35-10:45

Refreshment Break 10:45-11:00

11:00-11:20	Title: Towards controlling the thermal expansion of materials <i>Andrea Sanson, University of Padua, Italy</i>
11:20-11:40	Title: AIGC for materials innovations <i>Xiao-dong Xiang, Southern University of Science and Technology, China</i>
11:40-12:00	Title: Design and optimization of an X-rays station for technological irradiation <i>Benedetto Di Ruzza, University of Foggia, Italy</i>
12:00-12:20	Title: Detection and monitoring of Amyloid-β induced oxidative stress by Ratiometric Reactive Oxygen Species responsive probes <i>Man Shing Wong, Hong Kong Baptist University, SAR China</i>
12:20-12:40	Title: Application of FBG and DIC methods in the measurement and detection of structural defects in composite materials <i>Chien-Ching Ma, National Taiwan University, Taiwan</i>
Group Photo 12:40-12:50	
Lunch Break 12:50-13:35	
Session Chair	Philippe Baranek, EDF Lab Paris-Saclay, France
Session Chair	Amlan K. Roy, Indian Institute of Science Education and Research Kolkata, India
13:35-13:55	Title: Valorization of unsalable <i>Amaranthus tricolour</i> leaves by microwave assisted extraction of betacyanin and betaxanthin <i>Bidyut Mazumdar, National Institute of Technology Raipur, India</i>
13:55-14:15	Title: Photoluminescence of GaS–GaSe heterostructures upon two- and three-photon excitation by laser radiation <i>Fidan Ahmadova, Baku State University, Azerbaijan</i>
14:15-14:35	Title: Development of electrode from agro waste material for capacitive deionization: Overview and future outlook <i>Mahendra S. Gaikwad, National Institute of Technology Raipur, India</i>
14:35-14:55	Title: Development of corrosion resistance of coating formulated by Silane-Acrylic Monomer modified Water-Reducible Alkyd Resin <i>Figen Aynali, Aldechem Chemical and Purification Technologies, Turkey</i>

14:55-15:15

Title: A simple effective DFT scheme for excitation energies in organic chromophores

Amlan K. Roy, *Indian Institute of Science Education and Research Kolkata, India*

15:15-15:35

Title: Printing deposition and surface modification of 3D-printed PEEK for load-bearing medical implant manufacture

Pedro Miguel Palma Rendas, *NOVA School of Science and Technology, Portugal*

Refreshment Break 15:35-15:50

15:50-16:10

Title: Mixed finite element method with new approach

Yogesh M. Desai, *Indian Institute of Technology Bombay, India*

16:10-16:30

Title: Measuring mechanical stresses using acoustoelasticity

Auteliano Antunes dos Santos Junior, *Universidade Estadual de Campinas, Brazil*

16:30-16:50

Title: Corrosion inhibitory behavior of *Azadirachta indica* leaf extract on mild steel in an alkaline medium containing Cl⁻ ions

Manivannan Ramachandran, *National Institute of Technology Raipur, India*

16:50-17:10

Title: Synergic principles and regularities fracture of materials under low cycle fatigue conditions

Ahad Janahmadov, *Azerbaijan National Academy of Aviation, Azerbaijan*

17:10-17:30

Title: Review on alternative approaches for conversion of industrial lignin into the value-added products for circular bioeconomy

Anandkumar Jayapal, *National Institute of Technology Raipur, India*

17:30-17:50

Title: Nanoparticles @MOF composites for the Lewis Acid catalysis of Three-component organic transformations

Rupinder Kaur, *Indian Institute of Science Education and Research Mohali, India*

17:50-18:10

Title: Micro-structured composite materials with controlled multifunctional properties

Silvana Mercone, *Université de Tours, France*

Panel Discussions

End of Day 1



DAY 2

MARCH 22, 2024

Scientific Program

08:30-09:00 Registrations

09:00-09:15 Introduction

Moderator: Philippe Baranek, EDF Lab Paris-Saclay, France

Topics: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis

Distinguished Speaker Talks

Session Chair Roberto Alejandro Rojas Holden, Universidad Nacional de Asunción, Paraguay

Session Chair Suman Mukhopadhyay, Indian Institute of Technology Indore, India

09:15-09:35 Title: New advances in the analysis of ceramic materials
Roberto Alejandro Rojas Holden, Universidad Nacional de Asunción, Paraguay

09:35-09:55 Title: Controllable selection of martensitic variant enables concurrent enhancement of strength and ductility in a low-carbon steel
Yongfeng Shen, Northeastern University, China

09:55-10:15 Title: Thermal and moisture adaptive materials for localized thermal management and energy saving
Jintu Fan, The Hong Kong Polytechnic University, Hong Kong

10:15-10:35 Title: Guanidium Iodide treatment of size-controlled CsPbI₃ quantum dots for stable crystal phase and highly efficient red perovskite LEDs
Hinako Ebe, Yamagata University, Japan

Group Photo 10:35-10:45

Refreshment Break 10:45-11:00

11:00-11:20 Title: Extraction of partial discharge signal in predominantly VHF frequency range in the presence of strong noise in power transformer
Djordje Dukanac, Joint Stock Company "Elektromreza Srbije", Serbia

11:20-11:40	<p>Title: Pectinase immobilised on <i>in situ</i>-produced magnetic nanoparticles for nanocatalytic activity</p> <p>Naveen Tiwari, <i>University of Santiago de Compostela, Spain</i></p>
11:40-12:00	<p>Title: Degradation evaluation of pressboard insulation of converter transformer by applying FDS and digital image processing tool</p> <p>Anjali S. Bhalchandra, <i>Government College of Engineering, Aurangabad, India</i> Shrikant S. Mopari, <i>Government College of Engineering, Aurangabad, India</i></p>
12:00-12:20	<p>Title: Compression and energy absorption behavior of microwave sintered medium entropy alloy reinforced Magnesium matrix composite foam</p> <p>Priyabrata Das, <i>Indian Institute of Technology Delhi, India</i></p>
12:20-12:40	<p>Title: Bio polymer-based electrolytes for sustainable Li- ion batteries</p> <p>Nilanjana Banerjee, <i>UPES, India</i></p>
Group Photo 12:40-12:50	
Lunch Break 12:50-13:35	
Session Chair	Roberto Alejandro Rojas Holden , <i>Universidad Nacional de Asunción, Paraguay</i>
Session Chair	Suman Mukhopadhyay , <i>Indian Institute of Technology Indore, India</i>
13:35-13:55	<p>Title: Mechanical properties and environment of bone: Application to the measurement of fracture healing</p> <p>Tsiagadigui Jean Gustave, <i>University of Yaoundé, Cameroon</i></p>
13:55-14:15	<p>Title: A siderophore mimicking smart composite gelator system for selective uptake of Iron(III) from mixture of metal ions</p> <p>Suman Mukhopadhyay, <i>Indian Institute of Technology Indore, India</i></p>
14:15-14:35	<p>Title: Piezoviscous-polar lubrication of hybrid conical undulated journal bearing</p> <p>Arvind Kumar Rajput, <i>IIT Jammu, India</i></p>
14:35-14:55	<p>Title: Contribution of electrical tomography and electromagnetic technique to the development of building land and road routes</p> <p>Ahmed Benamara, <i>My Ismail University, Morocco</i></p>
14:55-15:15	<p>Title: Adoption of Metal-organic Frameworks (MOFs)-based Atmospheric Water Harvesting (AWH) systems in African countries</p> <p>Jianwei Ren, <i>University of Johannesburg, South Africa</i></p>

15:15-15:35

Title: The effect of bone and dentin matrix derivatives on the differentiation of human dental pulp stem cells for Osteogenesis and Dentinogenesis in a scaffold-free culture

Maryam Jalili Sadrabad, *Semnan University of Medical Sciences, Iran*

Refreshment Break 15:35-15:50

15:50-16:10

Title: Pair distribution function analysis on nanocrystalline semiconductors ZnS and CdS

Hamed Yaseen Mohammed Mutahhar, *Dr. Babasaheb Ambedkar Marathwada University, India*

16:10-16:30

Title: Prediction and optimization of laser shock peening on a turbine blade using an enhanced method

Dawood Ahmed Desai, *Tshwane University of Technology, South Africa*

16:30-16:50

Title: Controllability of electroacoustic wave process

Ara Sergey Avetisyan, *Institute of Mechanics of NAS of Armenia, Armenia*

16:50-17:10

Title: The combined effect of essential oils on wood physicochemical properties and their antiadhesive activity against wood mold fungi: Application of mixture design methodology

Moulay Sadiki, *Ibn Zohr University, Morocco*

17:10-17:30

Pre recorded Title: Spectroscopic/colorimetric dual-mode rapid and ultrasensitive detection of reactive oxygen species based on shape-dependent silver nanostructures

Varsha Usha Vipinachandran, *Vellore Institute of Technology, India*

17:30-17:50

Title: Adsorption performance of pure and doped BN monolayers with β -lapachone as effective drug delivery carriers based on DFT-D3 and molecular dynamic simulations

Mohammad Saman Shaheghi, *Islamic Azad University, Iran*

17:50-18:10

Title: Energy harvesting by cyclic tensile loading and Buckling via an Electrospun Polyblend elastic layer of PVDF/PU

Behrang Adeli, *Amirkabir University of Technology, Iran*

Panel Discussions

End of Day 2





**BOOKMARK
YOUR DATES**

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March 2025 | London, UK

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Virtual Conference

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DAY 1

MARCH 21, 2024

Scientific Program

GMT - Greenwich Mean time (UK Time)

07:45-08:00 Opening Ceremony

Topics: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis

Distinguished Speaker Talks

08:00-08:20

Title: Epoxy-based hybrid nanocomposites with nickel zinc ferrite nanoparticles and graphene nanoplatelets for advanced applications
Sahrim Ahmad, *University Kebangsaan, Malaysia*

08:20-08:40

Title: Piezo-phototronic effect in multi-layer structured optoelectronic: Bilateral piezoelectric charge modulation
Wenbo Peng, *Xi'an Jiaotong University, China*

08:40-09:00

Title: Investigation of Runx1 as a potential therapeutic target for cerebral infarction
Weihong He, *Sichuan University, China*

09:00-09:20

Title: Precise damage segmentation in infrastructure surface using fine-tuning U-Net based-deep learning
Ching-Lung Fan, *the Republic of China Military Academy, Taiwan*

09:20-09:40

Title: Band-gap and surface modifications of TiO₂ for photocatalytic decompositions under visible light
Abdul Wafi, *National Research and Innovation Agency(BRIN), Indonesia*

09:40- 10:00

Title: Modeling and simulation of Triple Metal Gate Junctionless Ferroelectric (TMGJFe) FET for enhanced analog performance
Jasdeep Kaur Dhanoa, *Indira Gandhi Delhi Technical University for Women, India*

Refreshment Break 10:00-10:15

10:15-10:35

Title: Spectroscopic/colorimetric dual-mode rapid and ultrasensitive detection of reactive oxygen species based on shape-dependent silver nanostructures
Varsha Usha Vipinachandran, *Vellore Institute of Technology, India*

10:35-10:55

Title: Decision making in a complex environment based on cognitive layers
Sadegh Banitalebi, *Imam Hossein University, Iran*

10:55-11:15

Title: The effect of ferrite bead on conducted emission in an automotive LED driver module with DC-DC converters
Oğuzhan Coşkun, *Bursa Uludag University, Turkey*

11:15-11:45

Title: Degradation evaluation of pressboard insulation of converter transformer by applying FDS and digital image processing tool
Anjali S. Bhalchandra, *Government College of Engineering, Aurangabad, India*
Shrikant S. Mopari, *Government College of Engineering, Aurangabad, India*

11:45-12:05

Title: Piezoviscous-polar lubrication of hybrid conical undulated journal bearing
Arvind Kumar Rajput, *IIT Jammu, India*

12:05-12:25

Title: Elimination of secondary oxide phases in CdTe nanostructured thin films prepared by conventional spray pyrolysis, and the influence of thermal annealing
Hossein Robotjazi, *Shahrood University of Technology, Iran*

Lunch Break 12:25-13:00

13:00-13:20

Title: Conjugated oligomers with Hetero-rings to improve photovoltaic performance
Ouafae Ninis, *Abdelmalek Essaadi University, Morocco*

13:20-13:40

Title: Formation of a solid solution in a polycrystalline Sc_2O_3 upon irradiation with xenon ions with energies of 140 and 300 keV
Alexandra Solovyeva, *Physico-Technical Institute in Sukhum, Republic of Abkhazia*

13:40-14:00 Title: Application of reflecting coating on a building's roof thermal performance- A review
Wurood Asaad Midab, *Ministry of Electricity, Iraq*

14:00-14:20 Title: Smart nanocomposites of conjugated polymers for sensing applications
Alexander Pud, *NAS of Ukraine, Ukraine*

14:20-14:40 Title: Microstructure, mechanical and corrosion properties of anodized ultrafine-grained titanium based materials for medical application
Dragana R. Mihajlović, *University of Belgrade, Serbia*

14:40-15:00 Title: Novel approach to assess seawater breakthrough using FTIR spectroscopy
Hauwa Abubakar Rasheed, *Nile University of Nigeria, Nigeria*

Refreshment Break 15:00-15:15

15:15-15:35 Title: Green particle board production from Agro-forest residue valorization
Prosper Mensah, *CSIR-Forestry Research Institute of Ghana, Ghana*

15:35-15:55 Title: Quantum correlations in two interacting spins under thermal effect
Mouhcine Yachi, *Chouaib Doukkali University, Morocco*

15:55-16:15 Title: Comparative study on industrial processabilities of cellulosic raw materials for eco-friendly textile production
Most Kaniz Moriam, *Massachusetts Institute of Technology, USA*

Closing Remarks

End of Day 1



GMT - Greenwich Mean time (UK Time)

08:45-09:00 Introduction

Topics: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis

Distinguished Speaker Talks

09:00-09:20

Title: Two-stage cultivation as effective strategy for enhanced productivity in plant and microalgal cell culture systems
Mohd Azmuddin Abdullah, *SIBCo Medical and Pharmaceuticals Sdn. Bhd., Malaysia*

09:20-09:40

Title: Hypoxic bone mesenchymal stem cell-derived exosomes direct Schwann cells proliferation, migration, and paracrine to accelerate nerve regeneration via circRNA_Nkd2/miR-214-3p/MED19 axis
Haopeng Wang, *Shanghai Jiaotong University School of Medicine Xinhua Hospital, China*

09:40-10:00

Title: Video steganalysis system for the cross domain steganography
Surendra Bhosale, *Veer mata Jijabai Technological Institute, India*

10:00-10:20

Title: Synthesis of novel vicinal diaryl triazoles with sulfur and hydrazine linkers as highly potent anticancer and antioxidant agents
Seyedeh Mahdieh Hashemi, *Mazandaran University of Medical Sciences, Iran*

10:20-10:40

Title: Collocation method for fuzzy fractional integro-differential equations
Suvankar Biswas, *Indira Gandhi National Open University, India*

10:40- 11:00

Title: Role of metal-polymer hybrid composites as fillers for reinforcement of epoxy resin and improving its properties
Ramya Rajan, *Amrita Vishwa Vidyapeetham, India*

Refreshment Break 11:00-11:15

11:15-11:35

Title: Energy harvesting by cyclic tensile loading and buckling via an electrospun polyblend elastic layer of PVDF/PU

Behrang Adeli, *Amirkabir University of Technology, Iran*

11:35-11:55

Title: Modelling of corrosion rate in the drinking water distribution network using Design Expert 13 software

Reena Singh, *National Institute of Technology Patna, India*

11:55-12:15

Title: Sol-gel synthesis, characterization and luminescence investigation of trivalent rare earth doped garnet phosphor

Anita Verma, *Kalinga University, India*

12:15-12:35

Title: Ethylene-alpha olefin elastomers: Liquid phase catalyst active center residential environment and copolymerization microkinetics

Muhammad Atiqullah, *Research Institute King Fahd University of Petroleum & Minerals, Saudi Arabia*

12:35-12:55

Title: Propagation impairment in free space Terahertz communication at sub-tropical territories

Debraj Chakraborty, *Swami Vivekananda University, India*

12:55-13:15

Title: The nucleation of crystals in volcanic glass

Galina Aleksandrovna Sycheva, *Grebenshchikov Institute of Silicate Chemistry, Russian Academy of Sciences, Russia*

13:15-13:35

Title: Effect of printing parameters on the mechanical properties and energy absorption characteristics of 3D printed specimen from Polylactic Acid (PLA) filament

Oluwaseun Kayode Ajayi, *Obafemi Awolowo University, Nigeria*

Closing Remarks

End of the Conference





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