

Peers Alley Media

827 E 51 Ave East, V5X1E4, Vancouver BC, Canada S WhatsApp No: +1(506)909-0537 Contact us: materialsscience@researchleap.org

7TH EDITION OF ADVANCED MATERIALS SCIENCE WORLDCONGRESS March 24-25, 2025 I London, UK

Theme:

Transforming Materials Science through Synergy and Sustainability: Bridging Research, Technology, and Industry

Sub-themes:

- Synergy in Science and Industry: Accelerating Advanced
- Materials Innovation
- Advanced Functional Materials
- Materials for Quantum Technologies and Quantum Computing
- Bio-inspired Materials and Biomimetic Design
- Materials Informatics and Data-driven Materials Discovery
- Pioneering the Circular Economy: Sustainable Material Innovations
- The Intersection of AI and Materials Science
- Advanced Materials in Healthcare: From Bench to Bedside
- Securing the Future: Advanced Materials in Defense and Security
- Electrifying Innovation: Materials for Energy Storage and Conversion
- The Policy Perspective: Regulatory Challenges and Opportunities

ADV. MATERIALS SCIENCE 2025

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



WHO Should Attend?

Materials Engineers	Materials Scientists	Nanotechnologists
Physicists and Chemists	Metallurgists	Geotechnical Engineers
Biomedical Engineers	Academicians and Students	Policy Makers
Industries	Entrepreneurs	Students
Materials Science Colleges	Materials Companies	Nanotechnology Companies
Training Institutes	Associations	Chemical Companies
Experts and Researchers of Biotechnology	Experts and Researchers of Physics	Experts and Researchers of Materials Science
Experts and Researchers of Nanotechnology	Experts and Researchers of Biology	Experts and Researchers of Environment
Experts and Researchers of Medicine	Experts and Researchers of Ceramics	Experts and Researchers of Energy
Experts and Researchers of Liquid Crystals	Experts and Researchers of Plasma	Experts and Researchers of Polymers & Semiconductors

Dr. Philippe Baranek





EDF Lab Paris-Saclay – IPVF, France

Dear Colleagues,

Warmest greetings to all those who are passionately dedicated to the field of advanced materials. It is with a great pleasure that I invite you to participate in the **"7th Edition of the Advanced Materials Science World Congress",** scheduled to take place on **March 24-25, 2025** in the enchanting city of **London UK**.

This conference aims to bring together researchers, scientists, academicians, and industry professionals from around the world to foster knowledge sharing, idea exchange, and exploration of the latest advancements in the challenging field of advanced materials.

This event represents an opportunity for stimulating discussions, delivering insightful presentations, aiming to create collaborative networks. Many exciting topics and areas are covered such as: materials synthesis, characterization and modelling, nanotechnology, medicine, biomaterials, renewable energy materials, construction materials, textiles, and much more.

I strongly hope that this conference will comprehensively and thoughtfully span various aspects of this captivating subject and provide insights that contribute to your research work and the development of ground-breaking advancements.

See you in London!

Dear Researchers,

The **7**th **Edition of the Advanced Materials Science World Congress** is scheduled for **March 24-25**, **2025**, in the fascinating city of **London**, **United Kingdom**. I am pleased to invite you to be part of this remarkable research meeting, where members from diverse areas of knowledge will come together to share the state of the art in their subjects.

In recent years, the Congress brought together researchers from all over the world, who had the opportunity to learn about the research being developed and, above all, to come into personal contact with their current and future partners.

In the areas of Materials Science, Nanotechnology and Chemistry, the conference aims to present many advances, namely in the application of Machine Learning tools to data analysis, simplifying the inspection of crucial systems and making results more reliable. In addition, new non-destructive techniques and new information on conventional techniques will be presented.

I hope to see you there.

Dr. Auteliano A. Santos Jr.







PRESENTATION FORUM

KEYNOTEFORUM / MINI-PLENARY SESSIONS

Presentations under Keynote Forum or Mini-Plenary Sessions includes abstracts with remarkable research value selected by the program committee. These significant speeches are delivered by globally recognized honorable speakers and it is open to all registrants.

DISTINGUISHED SPEAKERS FORUM (ORAL ABSTRACT SESSIONS)

In this forum, speakers and experts of the research field gets an opportunity to showcase their noble research work that involves comprehensive research findings. These formal oral presentations include a wide range of talks covering basic research to advanced research findings in accordance to the theme and scientific sessions of the conference.

STUDENT FORUM Poster session

This session is particularly introduced to encourage more number of student participation at international conferences, however it is not restricted only to students since it is also available for the participants with language barrier. There are specific guidelines to be followed to prepare the poster. Poster topic should be selected only from relevant scientific sessions with in-depth technical details.

YOUNG INVESTIGATORS FORUM

An exclusive opportunity for students and young investigators to present their research work through a formal oral presentation. Young Investigators Forum provides a global platform for young researchers and scholars to showcase their valuable contribution to the scientific world and to get acknowledged by the global scientific community of experts. It is an excellent opportunity to recognize young scientific assets with promising research ideas. These oral presentations are of shorter time duration with 10–15 minutes of informative and precise presentations in relevant scientific sessions. i

EDUCATIONAL WORKSHOPS/RESEARCH WORKSHOPS/ Corporate Workshops/Mini-Symposia

With an aim of transferring knowledge among the participants, workshops are introduced as a part of international conferences. These interactive and occasionally practical sessions gives an opportunity for participants to engage in detail discussion. Workshops are mostly scheduled for 60 to 90-minutes. It may range from learning about a specific topic relevant to international education, products and research which sometimes involves practical demonstration. It helps in enhancing skills, knowledge and understanding of the research field in depth through interactive discussions.

HIGHLIGHTS OF THE DAY SESSIONS

"Highlights of the Day Sessions" is introduced to discuss and focus a ray upon previous day ORAL ABSTRACT presentations by experts to summarise the key findings. It helps in getting better insights into the various dimensions of the topic.

MEET THE PROFESSOR @ NETWORKING SESSIONS

This session involves open discussion between the experts and session attendees, it gives enough time for getting answers to specific questions and doubts. It is an opportunity for attendees to increase their professional networking, sometimes also leads to an excellent collaboration opportunity.

EDUCATIONAL SESSIONS/ TRAINING PROGRAMS

Educational Sessions or training programs are specifically designed for a better understanding of the latest findings and technologies. These are generally45-minutesessionsthat gives an exposure to the multidisciplinary field, that provides in-depth learning experiences and address educational needs.



REGISTER & PARTICIPATE in

ADV. MATERIALS SCIENCE 2025

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

TYPES OF ACADEMIC REGISTRATIONS	TYPES OF BUSINESS REGISTRATIONS			
Speaker Registration	Speaker Registration			
COMBO A (Registration + 2 Night Accommodation)	COMBO A (Registration + 2 Night Accommodation)			
COMBO B (Registration + 3 Night Accommodation)	COMBO B (Registration + 3 Night Accommodation)			
Delegate Registration	Delegate Registration			
TYPES OF STUDENT REGISTRATIONS	TYPESOF ADDITIONAL REGISTRATIONS			
Registration	Accompanying Person			
YIF	E-Poster			
COMBO A (Registration + 2 Night Accommodation)	Virtual Presentation			
COMBO B (Registration + 3 Night Accommodation)	Workshops			
Posters	Start-Ups			

TIME TO CONNECT

WITH YOUR PEERS



CONCURRENT EDUCATIONAL SESSIONS Monday - March 24, 2025



Materials Science and Engineering Nanomaterials and Nanotechnology



- Advanced Materials and Nanotechnology
- Biomaterials and Medical Devices

GROUP PHOTO | COFFEE BREAK



Smart Materials and Applications Energy Materials



- **Ceramic Materials**
- **Composite Materials**
- Glass Science and Engineering

LUNCH BREAK



Polymer Science and Technology Surface Science and Engineering



Materials Physics Materials Chemistry

COFFEE BREAK



Computational Materials Science

Crystallography



- Graphene Technology
- Carbon and 2D Materials
- Green Technologies



CONCURRENT EDUCATIONAL SESSIONS TUESDAY - MARCH 25, 2025



Materials Synthesis And

Processing Materials

Characterization

Characterization, Theory And Modeling



Electronic, Optical And Magnetic Materials Nanostructured And Structural Materials

GROUP PHOTO | COFFEE BREAK

- Chemistry
 - Semiconductors
 - Metallurgical and
 - Materials Engineering



Advances In Dielectric, Piezoelectric Materials And Electronic Devices Condensed matter physics

LUNCH BREAK

- Optics
- Metals and Alloys
- Bioinspired materials and Systems
- Mineralogy



- Perovskites
- Materials Informatics
- Selective Laser Sintering
- Metamaterials
- Dichalcogenides

COFFEE BREAK



- Topological Insulators
- Energy Production and Storage
- Electronics and Photonics



- Artificial Intelligence
- Robotics
 - Synthesis and Catalysis
- Biocatalysis

GLIMPSES INTO OUR PAST CONFERENCES



Adv. Materials Science 2025

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

GLIMPSES INTO OUR PAST CONFERENCES









Adv. Materials Science 2025

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

HONORING DISTINGUISHED SPEAKERS OUR PAST CONFERENCES



MEET THE PROFESSOR SESSIONS OUR PAST CONFERENCES



YOUNG RESEARCHER SESSIONS @ OUR PAST CONFERENCES



BOOK LAUNCHES@ OUR PAST CONFERENCES



WE LOVE & SUPPORT PEERS ALLEY MEDIA CONFERENCES















ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Wave scattering by many small particles, creating materials with a desired refraction coefficient and other applications

Speaker Name: Alexander G. Ramm

Affiliation: Kansas State University, USA

Abstract:

The theory of wave scattering by many small impedance particles of arbitrary shapes is developed. The basic assumptions are: ad λ , where a is the characteristic size of particles, d is the smallest distance between the neighboring particles, λ is the wavelength.

This theory allows one to give a recipe for creating materials with a desired refraction coefficient. One can create material with negative refraction: the group velocity in this material is directed opposite to the phase velocity. One can create a material with a desired wave focusing property. Quantum-mechanical scattering by many potentials with small supports is considered. Equation is derived for the EM field in the medium in which many small impedance particles are embedded.

Similar results are obtained in [6] for heat transfer in the media in which many small particles are distributed. The theory presented in this talk is developed in the author's monographs [1], [7], [9], [12] and in papers [2]{[6], [8], [10], [11]. Practical realizations of this theory are discussed in [9]. In [9] the problem of creating material with a desired refraction coefficient is discussed in the case when the material is located inside a bounded closed connected surface on which the Dirichlet boundary condition is imposed.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

>>FEATURED TALKS <<

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Climate Change & Renewable Energy: Science, Technology, Economics, and Reality Advanced Concepts for Highly Efficient Solar Photon Conversion into Photovoltaics & Fuels Based on Quantization Effects in Nanostructures & Molecular Singlet Fission

Speaker Name: Arthur J. Nozik

Affiliation: University of Colorado, United States

Abstract:

The effects of climate change are upon us -- negatively affecting the global human population as well as the overall nature of our planet's surface. There are now a very great number of scientific and technological reports, economic analyses, and political debates about climate change and its effects on earth. However, there is no agreement among these myriad reports and scientists about the scientific and technological facts, the actual existence and consequences of climate change, the economic viablity of proposed and actual current approaches to modifying and/or adjusting to climate change and its consequences, and how political action should or could affect the course of climate change. But, for the purposes of addressing and minimizing the widely predicted potential of severe negative effects of climate change, it is important to conduct research and development of new approaches to global scale renewable energy implementation that will drastically reduce both the future rate of CO_2 & CH_4 emissions caused by human energy needs and the absolute concentration of CO₂ & CH₄ in earth's atmosphere. In this respect, to utilize solar power for the production of solar electricity and solar fuels on a global scale, it will be necessary to develop solar photon conversion systems that have an appropriate combination of high efficiency (delivered watts/m²), low capital cost ($\frac{m^2}{m^2}$), and low energy cost ($\frac{k}{k}$). One potential, long-term approach to attain high conversion efficiencies above the well-known Shockley-Queisser thermodynamic limit of 33% is to utilize the unique properties of quantum dot/rod/well (QD/QR/QW) nanostructures and Singlet Fission (SF) in molecular chromophores, to control the relaxation dynamics of photogenerated hot carriers and excited states in photoexcited molecules to produce either enhanced photocurrent through efficient photogenerated electronhole pair (ie, exciton) multiplication or enhanced photopotential through hot electron transport and transfer processes. To achieve these desirable effects it is necessary to understand and control the dynamics of SF and hot electron and hole cooling, charge transport, and interfacial charge transfer of the photogenerated carriers. These fundamental dynamics in various bulk and quantized nanoscale semiconductors and SF molecules have been studied for many years using various spectroscopies with fs to ns time resolution. The prediction that the generation of more than one electron-hole pair (which exist as excitons in size-quantized nanostructures and photoexcited molecules) per absorbed photon would be an efficient process in QDs, QRs, QWs and SF molecules has been confirmed over the past years in different classes of materials, molecules, and their architectures. Very efficient and ultrafast multiple exciton generation (MEG), also called Carrier Multiplication (CM), and SF from absorbed single higher energy photons has been reported in many quantized semiconductors and molecules and in associated solar photon conversion devices for solar electricity and solar fuels (e.g. H₂) production. Selected aspects of this work will be summarized, and recent advances will be discussed, including the very remarkable and extremely large beneficial theoretical effects of combining MEG with solar concentration. The analogous MEG effect in SF molecules and its use in molecular-based solar cells will also be discussed.

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



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Circumventing Challenges CVD Graphene Coating on Mild Steel: A Disruptive Approach to Remarkable/Durable Corrosion Resistance

Speaker Name: Raman Singh

Affiliation: Monash University

Abstract:

The talk will discuss the challenges in developing corrosion resistant graphene coating on most common engineering alloys, such as mild steel, and present recent results demonstrating circumvention of these challenges. In spite of traditional approaches of corrosion mitigation (e.g., use of corrosion resistance alloys such as stainless steels and coatings), loss of infrastructure due to corrosion continues to be a vexing problem. So, it is technologically as well as commercially attractive to explore disruptive approaches for durable corrosion resistance. Graphene has triggered unprecedented research excitement for its exceptional characteristics. The most relevant properties of graphene as corrosion resistance barrier are its remarkable chemical inertness, impermeability and toughness, i.e., the requirements of an ideal surface barrier coating for corrosion resistance. However, the extent of corrosion resistance has been found to vary considerably in different studies. The author's group has demonstrated an ultra-thin graphene coating to improve corrosion resistance of copper by two orders of magnitude in an aggressive chloride solution (i.e., similar to sea-water). In contrast, other reports suggest the graphene coating to actually enhance corrosion rate of copper, particularly during extended exposures. Authors group has investigated the reasons for such contrast in corrosion resistance due to graphene coating as reported by different researchers. On the basis of the findings, author's group has succeeded in demonstration of remarkable and durable corrosion resistance of mild steel as result of development of suitable graphene coating.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Harnessing Piezo-Plasmon Phototronics for Improved DSCC in 3D Nanostructures of Perovskite BiFeO3 Decorated with Au

Speaker Name: Khalid Mujasam Batoo

Affiliation: King Saud University

Abstract:

(Bismuth ferrite-based oxide nanostructures have been intricately processed to tackle the pressing issues of energy scarcity and environmental pollution. These nanostructures serve as potent solutions by acting as photoelectrodes for water-splitting reactions and facilitating the breakdown of organic pollutants via photocatalysis. The incorporation of gold (Au) into these nanostructures has been investigated to understand its impact on their physicochemical properties and subsequent application performance, mainly focusing on plasmonic effects. Utilizing techniques such as X-ray diffraction (XRD), absorbance, and transmission electron microscopy, the processed materials were thoroughly analyzed. The interaction of Au with the host BFO nanoparticle surface was confirmed through a detailed examination of their photoelectron spectroscopic data. Plasmonic effects were observed in the absorbance spectra, accompanied by significant changes in the optical spectrum upon Au decoration. Photoluminescence spectra indicated a notable influence of BFO and Au nanoparticles on the quality of defect states, as well as on charge transmigration and separation.

Comparative analysis with pristine BFO revealed enhanced photocatalytic and photoelectrochemical performance in Au-decorated BFO nanostructures. Time-dependent studies of photocurrent density demonstrated the stability of the processed photoelectrode materials in efficient water splitting facilitated by Au nanoparticles that improved charge transfer efficiency, as evidenced by Nyquist plots.

Furthermore, the nanocomposite exhibited remarkable piezo photocatalysis activity, showcasing high degradation rates of organic pollutants and improved hydrogen production from water-splitting reactions under direct sunlight illumination.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: A mathematical model for aerospace product MRO scheduling with remanufacturing

Speaker Name: Yasser Ghamary

Affiliation: Concordia University, Canada

Abstract:

The aerospace industry is essential for global transportation and technological growth, with Maintenance, Repair, and Overhaul (MRO) operations playing a critical role in ensuring the safety and reliability of aircraft. Ensuring the integrity of aircraft products and components through effective MRO operations is vital to the sector's success. This paper presents a comprehensive linear programming model designed to optimize the scheduling of aircraft C-check and D-check maintenance operations. The model incorporates multiple component treatment options, including replacement, repair, and remanufacturing, to address various maintenance needs.

A significant feature of the model is its integration of risk assessment for component failure before the next maintenance interval. This risk-based approach allows for more informed decisionmaking, ensuring that maintenance actions are not only cost-effective but also adhere to stringent safety standards. The model also considers the allocation of essential maintenance resources, such as labor and machinery capacities, ensuring that these resources are utilized efficiently.

To evaluate the effectiveness of the proposed model, scenario analyses are conducted. These scenarios assess the impact of varying parameters such as resource availability, unplanned maintenance costs, and penalties on the overall maintenance strategy. One of the key findings is the potential for remanufacturing to significantly reduce maintenance expenses in MRO operations, making it a viable option for cost savings and sustainability.

The primary contribution of this research lies in its novel approach to integrating risk assessment with resource optimization in MRO scheduling. By providing a comprehensive framework that enhances decision-making for MRO maintenance operations, this study offers valuable insights for improving the efficiency and cost-effectiveness of maintenance strategies in the aerospace industry. The model's ability to adapt to different operational circumstances and its focus on minimizing maintenance costs while maintaining safety standards make it an advancement in the field of aerospace MRO.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: The Promise of Pastiche: How AI Systems Pervade the Cultural Heritage Sector

Speaker Name: Susan Hazan

Affiliation: Digital Heritage, Israel

Abstract:

The human-machine interaction of large-scale learning models (LLMs), and artificial intelligence (AI) art generators set up enormous copyright challenges for the cultural heritage sector as they attempt to inscribe the provenance of the images created by AI into their metadata. At the heart of the matter is that rather than duplicating images from stock photos or artist portfolios, AI-image generators are "trained" on enormous data sets to create unique images. often without their owner's permission or even acknowledgment. Never have images or ideas been so easily reproducible. At the same time, GPT text generators have a penchant for hallucinations and suggest strange verbiage that can range from the simple truth to total fiction. This chapter will investigate the models available for anyone wishing to create texts and images on the keyboard. Creating the verbal cue and waiting for the sublimity of every desire is mesmerizing, enthralling, and even addicting, but the impact on human creativity somehow feels like an accident waiting to happen. AI is currently experiencing its tulip mania moment as the explosion of new systems becomes publicly accessible confronting human creativity head-on with a pastiche of prior art, prior words, and more profoundly, prior creativity. Some even say that we are hurtling into an AI disaster with the release of gen AI already freely floating around the public domain. The genie is out of the bottle and only time will tell where this gen AI genie will take us.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Synergetics principles of the regularity of the development of microcracks in elements of the friction units

Speaker Name: Ahad Janahmadov

Affiliation: Azerbaijan National Academy of Aviation

Abstract:

In the study of tribological processes the highly nonequilibrium states of crystal lattice arise inside the frictional contact. It is no longer described by Hooke's law, and undergoes a local structural transformation, besides its movement toward the equilibrium occurs as a synergetic process. However, the application of purely synergetics within the framework of continuum mechanics, by itself leads to the conflicting conclusions.

The synergetic principles and the fractal approach of physical mesomechanics allow to describe kinetics of the plastic deformation and fatigue of various materials under different loading conditions from a single point of view, including the cyclic loading of tribocoupling, controlling of points of the bifurcation.

In this paper, the stress-strain state of brake disks of transportation vehicles is analyzed to prevent the occurrence of microcracks on their working surfaces and the model is developed for studying nonstationary friction modes and fracture of contacting elements. The concept of metal fatigue is developed within the framework of physical mesomechanics.

The proposed model explains the change in the mechanism of crack propagation under conditions of low-cycle fatigue of metal-polymer friction pairs when air enters the crack, and leads to the oxidation of fracture surfaces with the formation of a film. Perhaps, in this case, the formation of surfaces with a subgrain structure occurs.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Copper oxide nanostructures with nanoneedles shape obtained by direct reaction with nitrogen-doped carbon quantum dots: development of an electrochemical sensor to glyphosate

Speaker Name: Thiago C Canevari

Affiliation: Mackenzie Presbyterian University, Brazil

Abstract:

This work describes the synthesis, characterization, and application of nanoneedle-shaped CuONPS/Cdot(N) nanostructures obtained by direct reaction between Cu(NO3)2 and nitrogen-doped carbon quantum dots (Cdot(N)). The CDot(N) obtained from oleylamine using the electrochemical technique of chronoamperometry was used as catalysts and synthesizing CuONPS/Cdot(N) directing agents in nanostructures. The CuONPS/Cdot(N) nanostructures were characterized using transmission electron microscopy (HR-TEM), X-ray photoelectron spectroscopy (XPS), ultraviolet spectroscopy (UV-Vis), infrared spectroscopy (FTIR), and electrochemical techniques. HR-TEM and XPS analysis has shown that CuONPS/Cdot(N) nanostructures are constituted for both CuO and Cu2O nanospecies. The printed carbon electrode was modified with CuONPS/Cdot(N) nanostructures. It was used to determine the pesticide glyphosate in PBS, pH 5.5, at a potential of E = -0.02 V, using the differential pulse voltammetry technique with a detection limit of 11.6 nMol L-1. The printed carbon electrode was modified with CuNPS/Cdot(N) nanostructures and was also used to determine pesticides in real water samples with good performance.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Hydrogel coatings on universal medical devices with water-responsive Janus adhesion and acidity-triggered transformation for adaptive antibacterial treatment and fluorescence diagnosis

Speaker Name: Li Ming

Affiliation: Peking University People 's Hospital, China

Abstract:

Hydrogel coatings of catheters have attracted extensive attention in the field of medical devices due to its hydrophilicity and softness, while scarcities of Janus adhesion, adaptive antibacterial property, and real-time disease monitoring restricted their clinical translational applications. Herein, a novel hydrogel coating with water-responsive Janus adhesion and acidity-triggered transformation was fabricated for antibacterial treatment and fluorescence diagnosis of catheters-associated infections. First, a sufficient adhesion strength of 44.6 \pm 1.9 kPa effectively prevented shedding of the hydrogel coating during catheterization, and meanwhile a superlubricated layer with an extremely-low coefficient of friction of about 0.03 was formed to reduce friction pain in an aqueous microenvironment. Furthermore, size and fluorescence intensity of chitosan/bovine serum albumin-gold nanoparticles within the hydrogel were varied with pH due to aciditytriggered transformation, where an adaptive release of antibacterial nanoparticles was achieved to reduce biofilms formation and alleviate inflammation degree synergistically. More importantly, such antibacterial treatment was monitored in real-time dependent on an on-off variation of fluorescence intensity. Overall, amounts of in-vitro and in-vivo results performed in rabbit urinary tract infection model and porcine tracheal intubation model fully suggested our newlysynthesized hydrogel coating on universal medical devices showed a promising potential for integrated diagnosis and treatment of cathetersassociated infections



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: The Development of Recycled Oyster Shell Waste in Polymer-modified Green Concrete towards Enhanced Mechanical Properties and Environmental Benefits

Speaker Name: Fanny Tang

Affiliation: Hong Kong Metropolitan University

Abstract:

Due to the extensive usage in large-scale buildings, highways, bridges, dams, and marine engineering constructions, worldwide use of concrete has expanded dramatically. During the manufacture of cement, significant volumes of greenhouse gases are generated. Excessive dredging, extraction, and processing of natural aggregates has already disrupted local ecosystems and harmed the environment. The conventional concrete production has а substantial adverse effect on the environment. This has initiated a drive towards more sustainable concrete production, in order to decrease the greenhouse gas emission. Some researchers have made attempts to look for alternative materials to substitute conventional materials in concrete. The most economical and sustainable ways is to replace cement by using wastebased materials for substitution. One of the feasible solutions is the recycling the of oyster shell waste. The microstructure analysis revealed that the composition of oyster shell is Calcium Carbonate which is the primary composition in concrete (Table1 and Figure 1).
 Table 1. Chemical composition of oyster-shell

CaCO3	SiO2	MgO	A12O3
95.994%	0.696%	0.649%	0.419%

Figure 1. SEM images showing the surface microstructure of the surface of oyster shell As such, the objectives of the research study is to determine the composition and weight percentage of oyster shell waste, aggregates, cement and polymer resin to provide optimum strength enhancement in concrete. Second, a comprehensive supply chain, beginning from the collection of oyster shell waste and pre-treatment to adaption of concrete with reused oyster shell will be examined. The result indicated that the substitution ratio of oyster shells (10-20%), polymer binders as aggregate (10-20%) could provide a positive enhancement to compressive strength, split tensile strength and permeability on the properties of green concrete.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Facile fabrication of a Z-scheme g-C3N5/Gd-MOF/ silver nanocube composite as a new generation visible light active photocatalyst for abatement of persistent toxic pollutants

Speaker Name: Varsha UshaVipinachandran

Affiliation: Vellore Institute of Technology

Abstract:

Some of the persistent hazardous contaminants that readily dissolve in water with a recognizable hue are hexavalent chromium and neomycin antibiotics. Herein, a Z-scheme g- C_3N_5/Gd -MOF/silver nanocube (CNGdAg) ternary composite was successfully designed by the combination of graphitic carbon nitride (g- C_3N_5), gadolinium-based molecular organic framework (Gd-MOF), and silver nanocubes (AgNCs). Under visible light irradiation, CNGdAg outperforms individual components and binary composites in the photoreduction of hexavalent chromium (Cr⁶⁺) and the removal of neomycin. The maximum photocatalytic efficiency of Cr⁶⁺ (98%) in 150 minutes and complete neomycin removal in 25 minutes were accomplished by the CNGdAg-40% composite. A hydrothermal approach was chosen to prepare this visible light active composite. The formation of photogenerated electrons and superoxide radicals plays a major contributing factor in the efficient degradation in a short period without using any external components. The combined effect of the individual components in the composite led to the remarkable degradation via the Z-scheme pathway. This work exemplifies that the CNGdAg-40% photocatalyst can be used for the removal of heavy metal ions and organic contaminants from aquatic environments.



The work has been published in Environmental Science Nano with impact factor 7.3.

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



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: The use and mechanisms of environmentally friendly biofilm inhibitory or disruption

Speaker Name: Tugba Kilic

Affiliation: Gazi University

Abstract:

Biofilm structure is the layer formed by beneficial and/or pathogenic monospecies and multispecies microbial cells adhering to a biotic (tissues) or abiotic (medical or food devices) surface through extracellular matrix components. The matrix comprises exopolysaccharides, proteins, lipids, extracellular DNA and RNA, and other molecules. Biofilm structure is associated with medical and industrial processes. Medically important pathogenic bacterial species can form biofilms by colonizing clinical surfaces and medical devices. Biofilm cells may be more resistant to antibiotics, biocides, nutrient deficiencies, and attacks on the immune system than planktonic cells due to the thick layer they form. About 99% of bacteria are biofilm producers. Biofilms cause contamination of food-related surfaces or about 65-80% of microbial infections. The thick biofilm matrix can block the passage of antibiotics. The aim is to prevent bacterial biofilms before they form or to disperse the cells within the formed biofilm structure and return them to planktonic cell form. Biofilm formation is a complex process involving bacterial signaling systems. Moreover, the complex structure of the biofilm may result from phenotype-adaptive and genetic-related mechanisms. Studies are on inhibiting these signals, such as quorum sensing (bacterial communities), or preventing biofilm formation with other antibiofilm agents, such as antimicrobial peptides, essential oil, ozone, and green synthesized nanoparticles. In conclusion, microbial infections and food contamination associated with biofilm formation continue to be a global concern. Therefore, since biofilm formation mechanisms and matrix component properties vary from species to species, species-specific new environmentally friendly therapeutic agents and approaches must be discovered for biofilm control. Primarily, comparative analysis of transcriptomic data may identify novel dysregulated genes related to biofilm formation. Furthermore, dual and triple combination combinations of antibiofilm agents of different origins can be used, such as essential oil-antibiotics, antimicrobial peptide-antibiotics, quercetin-allicin, ultrasoundbiosurfactants, silver nanoparticles-antibiotics for a synergistic effect.





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Investigating the effect of stretch on the structural formation and electrical conductivity of nano layers of PU/PVDF polymer alloy

Speaker Name: Behrang Adeli

Affiliation: Amir Kabir University of Technology

Abstract:

Previous research investigated the possibility of producing electric current from PU/PVDF alloy layers under tensile cyclic loading. This research examines the effect of electrospinning stretching on the structural uniformity and the ability to increase the electrical conductivity of single-layer nanolayers obtained from the PVDF/PU polymer combination. Assuming the other variables of the process to be constant, it was observed that the stretching of the fibers with the help of increasing the harvesting speed during electrospinning has reduced the formation of holes and structural weak points, and it results in the parallelism of the fibers and the orientation of the nanofibers. This causes an increase in tensile strength and an increase in electrical conductivity from the layer under tensile stress. Still, this stretch shows this improvement to a certain extent and has adverse effects in higher amounts.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Enhancing thermal efficiency of cookware through fin implantation: experimental analysis and numerical validation

Speaker Name: Saurabh Pradeep Joshi

Affiliation: Shri Sant Gajanan Maharaj College of Engineering Shegaon

Abstract:

Growing need for non-renewable energy, like petroleum, and its extraction challenges urge scientists to prioritize renewable resources for sustainable energy. Extensive research is addressing domestic LPG overconsumption and energy-saving. This study focuses on enhancing energy efficiency by adding fins to the bottom of specific cookware. To achieve this goal, a study involves the analysis of up to five stainless steel cookware, each equipped with a unique fin setup designed to enhance thermal efficiency, raise temperatures more effectively, reduce gas consumption, optimize gas flow rates, and assess various dimensionless numbers. Results shows that among all the five cookware, Cookware 3 (CW3) outperformed by showing the thermal efficiency of 61.5% to the gas flow rate at 15.27 mL s -1. This modified cookware showed an improved thermal efficiency (4.065% at gas flow rate of 15.27 mL s -1) when compared to the performance of a normal cookware with no fin arrangement present. In addition, the experimental data are validated using ANSYS Fluent software and MATLAB platform with Deep Neural Network-based Binary Bat algorithm (DNN-BBA). The results of the DNN-BBA technique showed a strong correlation with the actual results for temperature increase, thermal efficiency, gas consumption, Nusselt number, Prandtl number, and Rayleigh number. Additionally, the present study can maintain the burner's thermal efficiency at a higher level of 3%, compared to the previous study which achieved 2.5%.





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Lévy's solution for laminated composite plates using higherorder shear and normal deformation theory

Speaker Name: Yogesh M. Desai

Affiliation: Indian Institute of Technology Bombay

Abstract:

Equivalent single layer theories (ESL) have been extensively used in the analysis of plates. One of the common assumptions that are considered in all the ESL theories is that the thickness is small as compared to the in-plane dimensions. This assumption is the basis for converting a 3D plate problem into a 2D plate problem by assuming a displacement-model along the thickness. Higher-order shear deformation theories (HOSTs) consider more realistic non-linear variation of displacements along the thickness as compared to the other ESL theories i.e., the classical plate theory (CPT) and first-order shear deformation theories (FOSTs), which consider the linear variation. Due to this reason the solutions obtained using HOSTs are closer to the elasticity solutions. In this paper, static solution of the laminated composite plates is provided using 12 degrees of freedom higher-order shear and normal deformation theory (HOSNT). The results are obtained using the state-space approach for Lévy-type plates i.e., two opposite plate edges having simply-supported boundary condition and other two plate edges having combination of simply-supported, clamped and free boundary conditions. Results obtained match very well with the corresponding results available in the literature.





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Characterization and SRIM Simulation of Ions Irradiated Nanowires

Speaker Name: Shehla Honey

Affiliation: University of Okara

Abstract:

Ni-NWs have emerged as a viable material due to their electrical, thermal, and magnetic properties.

In present research work Ni-NWs are purchased from Plasma Chem (Germany) with diameter in the range 200 to 300 nm. Ni-NWs are irradiated by copper ions beam irradiation to study the changes in properties. Ni-NWs are exposed to copper ions beam of energies 30keV, 40keV and 50keV and fluence was 1 X 1015 ions/cm2 at room temperature. Radiational effects of copper ions beam of various energies on the Ni-NWs structure and morphology are studied by characterizing the sample using X-Ray Diffraction and Transmission Electron Microscopy (TEM) techniques. XRD results show the characteristic peaks of Ni-NWs having cubic phase. Intensities of the peaks found to be reduced by changing the energies. Grain sizes were calculated by using Scherrer's equation. Calculations show that Crystallite size was increased up to 40 KeV and then started to be decreasing. Dislocation density and lattice strain is also calculated which showed opposite behavior compared to crystallite size. Dislocation density and lattice strain initially decreased and started increasing after 40 KeV. TEM images revealed that radius of Ni-NWs reduced by copper ions beams irradiation. Reduction in radius is observed due to lose of atom because of copper ions beam irradiations. Stopping Range of Ions in Matter (SRIM) was also performed to know about the presence of defects or ionization occurring due to irradiation in the un-irradiated and irradiated samples. This research highlights the changes in properties of Ni-NWs due to copper ions beam irradiations for its implementation as a transparent electrodes in optoelectronic devices.

Later, nano-welding technique for fabrication of X-, Y-, II- and T-shapes molecular junctions between silver nanowires (Ag-NWs) using irradiation by high energy proton beam is demonstrated [1, 2]. Thereafter, large scale networks of Ag-NWs is fabricated by high energy proton ions beam irradiation at different beam fluencies. Large scale welding is confirmed by transmission electron microscopy (TEM) and scanning electron microscopy (SEM) [3]. After those Ag-NWs networks have been irradiated with copper (Cu) ions having MeV energy. The effect of ion fluencies on optical and electrical properties of Cu ion irradiated Ag-NWs are investigated. It has been observed that electrical conductivity and optical transmittance increased with the increase of Cu ion fluencies [1]. Similarly, nickel nanowires (Ni-NWs) meshes are fabricated by ions beam irradiation induced nanoscale welding of NWs on intersecting positions. Ni-NWs are exposed to beam of 50 KeV Argon (Ar+) ions at various fluencies in the range ~1015 ions cm-2 to 1016 ions cm-2 to obtain welding of Ni-NWs and then exposed to 2.75 MeV hydrogen (H+) ions to obtain strengthening in welds of Ni-NWs and modify electrical and optical properties [4].





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Gaseous Spectral Attenuation Corresponding to Different Relative Humidity, Humidity Fluctuations and Air Turbulence in THz Transmission

Speaker Name: Debraj Chakraborty

Affiliation: Brainware University

Abstract:

The fluctuation of atmospheric humidity, in addition with air turbulence, leads to focusing and defocusing effects of THz signal, which is well known as scintillation. Falling aerosols are also responsible for the scintillation effect. Fog particles are usually regarded as a mixture of suspended particles, air, and water. The dielectric constant of fog can therefore be related to the dielectric constant and volume fraction of each individual component. In the presence of very small amount of liquid water content, dry fog is generally formed. The dielectric constant of dry fog can be measured without humidity corrections. On the other hand, wet fog has a major dependence on water entity. Terahertz signal undergoes scattering due to presence of aerosols in atmosphere. The water droplets can absorb the incident THz signal strongly, which in turn may lead to the qualitative degradation of a secure THz link. The author has already focused on the scattering effects previously. In a turbid medium, along with scattering, scintillation of THz signal, as a consequence of relative velocity of atmospheric hydrometeors, also comes to play. Moreover, this relative velocity is again dependent on the water content of aerosols. The effects of THzscintillation due to single and multiple scattering phenomena along with relative humidity fluctuation in tropical weather scenario, have been thoroughly analysed. It has also been found from the study that, the increase in atmospheric humidity, in turn, leads to increament in the THz signal scintillation. The scintillation effect remains almost invariant for humidity fluctuation within \sim (40%-60%). besides, the humidity leads to a reasonable change in THz attenuation spectrum





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Elimination of Secondary Oxide Phases in CdTe Nanostructured Thin Films Prepared by Conventional Spray Pyrolysis, and the Influence of Thermal Annealing using CVD device

Speaker Name: Hossein Robatjazi

Affiliation: Shahrood University of Technology

Abstract:

In this presentation, thin films of cadmium telluride (CdTe) were prepared using conventional pyrolysis spray method on glass substrates at different temperatures (250°C, 300°C and 350°C). Field emission scanning electron microscope (FESEM) images showed that the substrate temperature significantly affects the morphology and thickness of the grown layers, and as the temperature increases, the morphology of the layers is very sensitive to the growth temperature. From the cross-sectional images, it is clear that as the temperature of the substrate increases, the thickness of the layers decreases (from 2.1 µm to 700 nm and 550 nm) and at a temperature of 350 the surface with columnar configurations made of relatively large nanosheets with a size of about 150 Covered up to 200 nm. Seebeck effect measurements showed that all studied layers have p-type conductivity. The results of X-ray diffraction and Raman spectroscopy showed that the layer grown at 350 °C has better crystalline quality of CdTe, although it still contains secondary oxide phase components (TeO2, TeO3, and CdTeO3), consistent with the electrical resistivity analysis of the data. is the temperature. To remove the oxide phase components in this sample, we used the annealing process with CVD device in the presence of N2 gas flux for 1 hour at two different temperatures of 400°C and 450°C. According to the FESEM images, it is clear that increasing the annealing temperature increases their average size (200-250 nm) while the constituent grains are tightly packed. XRD diffraction, Raman spectra, and activation energy estimated from electrical resistivity analysis versus temperature data confirmed that annealing at 400 °C, the optimal annealing temperature, was sufficient to remove secondary oxide phase components.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Quantitative Gait Analysis for Duchenne Muscular Dystrophy Diagnosis: A Machine Learning Approach

Speaker Name: Manal Mostafa

Affiliation: Ain Shams University

Abstract:

Neurologic and musculoskeletal damage can be diagnosed by analyzing gait. Manually analyzing the motion data is a time-consuming process, requiring significant effort and attention from the therapist. Furthermore, the analysis's accuracy and reliability are heavily influenced by the therapist's proficiency and decision-making abilities. This paper establishes a pathological gait classification method for quantitative diagnosis of the most prevalent lethal neuromuscular genetic disorder named Duchenne Muscular Dystrophy (DMD). Here, we juxtaposed sagittal kinematic and spatiotemporal characteristics of gait, derived from 2D and 3D pose estimation trajectories, with those obtained from concurrent 3D motion capture (MoCap) from overground walking of healthy children. The proposed method derives time-distance parameters such as speed, step length, stride duration, and cadence, as well as sagittal joint angles of the lower extremities (for instance, hip, knee, and knee flexion angles), from a newly gathered benchmark related to children with DMD. Then, machine learning algorithms are investigated to determine patterns that can identify children with DMD gait disturbances and characterize the disease progression over time. The experimental results proved that our low-cost method based on recorded RGB video can optimally detect gait abnormality and achieve a prediction accuracy of 96.2% for SVM and 97.37% for XGBoost.





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Improving the antibacterial performance of 304 stainless steel using Nd-YAG laser irradiation

Speaker Name: Sahar Sohrabi

Affiliation: Iran University of Science & Technology

Abstract:

Nowadays, due to the high antibiotic-resistant bacteria development followed by increasing the human-health problems, antibacterial surfaces fabrication is one of the most important issues in the world which attracted the scientist's attention. Although several surface parameters influence on the bacterial adhesion rate, surface wettability, morphology and topography are considered as the most important ones.

Laser irradiation is proposed as a clean method for surface modification. In laser-material interaction, different mechanisms such as melting, vaporization, plasma formation and phase explosion may occur. Micro-nano scale structures can be induced on a surface following laser irradiation. These controllable structures change surface topography as well as wettability. On the other hand, surface nanotexturing is a new strategy for antibacterial surfaces fabrication. Based on the laser parameters and material's response, chemical modifications may also occur on the surface following irradiation. Surface properties (especially absorption coefficient at the laser wavelength) and laser parameters such as laser fluence, determine the main mechanism of the treatment and affect the laser-material interaction efficiency and the shape, the size and density of the formed structures. Since surface wettability depends on the surface morphology and chemical composition, the desired wettability on a surface can be achieved by laser parameters optimization. Then, laser treatment can be used for changing the surface behaviour in contact with different microorganisms like bacteria on surface.

Since 304 stainless steel is widely used in various industrial applications from food processing equipment to medicine industry due to its unique advantages such as high corrosion resistance, high heat resistance and low cost, improving its antibacterial activity is essential. In this presentation, after explaining the influential parameters on the antibacterial surface fabrication, Nd-YAG laser irradiation of stainless steel and its influence on the sample morphology, topography, wettability and bacterial adhesion rate is explained.





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Small-quantity cooling lubrication in creep-feed grinding: Surface quality and residual stress analysis

Speaker Name: Mohammad Sediq Safi

Affiliation: Allamah University

Abstract:

Small-quantity cooling lubrication (SQCL) has shown great promise as an eco-friendly alternative to traditional flood cooling in creep-feed grinding processes. This study examines the effects of various cooling conditions (dry, SQCL, and flood cooling) on the creep-feed grinding dynamics of 420 stainless steel specimens. The research focuses on key parameters such as friction coefficient, surface texture, and through-thickness residual stresses.

The results show that both SQCL and flood cooling exhibit marginal reductions in the friction coefficient compared to dry conditions, due to their lubricating properties. However, SQCL grinding stands out with a significantly smoother surface finish, achieving an average roughness 42% lower than that of dry grinding.

Furthermore, the study reveals that increasing cutting depth and feed rates lead to elevated residual stresses on the specimen's surface. Notably, SQCL cooling demonstrates substantial reductions in residual stresses compared to dry conditions. These findings highlight the potential of SQCL as a sustainable and effective cooling method in creep-feed grinding processes, offering improved surface quality and reduced residual stresses. Overall, this research contributes to the development of more efficient and environmentally friendly grinding techniques.

This study highlights the advantages of SQCL as an alternative cooling method in creepfeed grinding processes. SQCL not only improves surface quality by achieving a smoother finish but also mitigates residual stresses more effectively than dry grinding. These benefits make SQCL a promising solution for enhancing the performance and sustainability of grinding operations.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Economical and Sustainable Development of Nanostructured materials engineering for Lubrications, Photovoltaic, Gas Sensors, and Energy Storage Applications

Speaker Name: Ramphal Sharma

Affiliation: Deemed to be University

Abstract:

Nanostructured materials engineering and technology has progressed rapidly in the direction of 2D layers and materials development for the need of the industry developments. Nanostructured materials engineering and technology are pervasive in many applications, optoelectronics, optical coatings (anti-reflection coatings), magnetic films (data storage), environmental (smart window), energy (solar cells, batteries), gas sensors, and super hard coatings, etc. Energy is essential for economic development and growth. Especially with the development of nanotechnology, electrochemical, and material science, interest in research and production of both efficient and lower-cost materials is increasing progressively. With the rapid growth of development and the drive to expand the economy, society demands more lubrication and electricity. Solar energy is the most prolific method of energy capture in nature. However, the economic drive to make solar cells more cost effective and efficient has driven developments in many different deposition technologies, including dipping, plating, thick film deposition and thin film deposition. The use of nanostructured thin films for efficient use of solar cells in production of n & p-type semiconductor materials is one of the most important sources of energy and new-generation energy. The Nano lubrication and energy storage can be most practically realized by electrochemical storage technologies using reversible conversion of chemical to electrical energy. In this sector, Lithium-ion battery (LIBs) is the good alternative energy storage device option compared to the other energy storage systems. Furthermore, it is lightweight, non-toxic, has high power and energy density and longer cycle lifetime compared to other energy storage devices. We have developed thin films of TiO₂, LiS, LiSe, LiSeS, and MnO₂ electrode materials by employing simple, green and cost-effective methods and exploring them into energy storage devices. It shows the reversible specific capacity of more than 206 mAh g⁻¹ at a current density of 33 mA g⁻¹ and it is comparatively higher than the earlier literature reports. Pure and doped SnO₂ nanoparticles thin films have been synthesized using remnant water collected from soaked Bengal gram beans extract. The synthesis method described in this work is facile and versatile, providing opportunities to control the morphology of various other semiconducting metal oxides, with particular promise for application in gas sensors. The pure and doped biosynthesized SnO₂ nanoparticles were coated onto the glass substrate using doctor blade method to form thin films. These thin films were investigated for their gas sensing properties and were found to be highly sensitive to different gases. The pure SnO₂ sample showed a response of 34% for 600ppm NH₃ at room temperature (~30 °C). With cobalt doping, this response got enhanced to 43% for 100ppm NH₃ gas at room temperature. The gold and nickel doped SnO₂ thin films were found to be sensitive to NO₂ gas at 200 °C operating temperature. The gold doped SnO₂ exhibited a response of 30% while Ni-doped SnO₂ showed 40% response. The Cu doped SnO₂ thin films were found to be highly sensitive to H₂S gas at 200 °C operating temperature. It gave a response of 38.33% for 100ppm H₂S gas. Considering the indicated trends and energy requirements, it has been important to transfer this technology in detail regarding the surface technologies related to the nanostructured materials engineering and technology instead of bulk materials.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: A Biogenic Approach to Develop Guava Derived Edible Copper and Zinc Oxide Nanocoating to Extend Shelf Life and Efficiency for Food Preservation

Speaker Name: Susmita Dey Sadhu

Affiliation: University of Delhi

Abstract:

Nanostructured integrated polymeric coatings have been transpired to preserve vegetables and fruits' quality attributes. Edible nanocoating packaging can significantly prolong the shelf life of fruits by preventing moisture loss and maintaining their freshness. This is because the coating acts as a barrier, preventing water vapor and gases from escaping or entering the fruit, which helps to maintain its firmness, color, and texture. These coatings facilitate barrier properties on the surface of fruits and vegetables and generate a conducive micro-environment by optimizing the concentration and obstructing the ripening process. A bio-nano hybrid based on guava extract intercalated nanoparticles were synthesized using a chemical reduction method for applications in fruit coating. The fabrication of resultant nanocomposites was confirmed by the shifts observed in vibrational frequencies and basal peaks observed by using an X-Ray diffraction pattern. The prepared nanohybrid further elucidates better thermal stability and their hydrotalcite-like structure examined by Field Emission Electron Spectroscopy displayed plate-like structure and homogeneous distribution of nanoparticles into the matrix. The CuO/guava extract nanocomposite has shown 37.79% of weight loss contrary to pristine extract which has 64.92% evaluated using thermogravimetric analysis. The edible nanocoating was developed using the dipcoating method on fresh papaya. To evaluate the efficacy of developed nanocoating, various attributes such as pH, acidity, sensory analysis, weight loss, and water activity coefficient for 18 days were investigated. In addition, the role of dietary sugar with the increase in the shelf life of nanoparticles coating was synchronized. The obtained results revealed that the shelf life of papaya increased with the application of copper nanohybrid coating which propounds its application in food preservation.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly Title: Investigation of the Structural, Electrical, and Magnetic behavior of Co3+ - Ti4+ doped Strontium Hexaferrite for Microwave and Low density recording media applications

Speaker Name: Priyanka Sahu

Affiliation: Indian Institute of Technology Indore

Abstract:

We report the effect of Co3+ -Ti4+ doped SrFe12-(x-y)CoxTiyO19 (x=y=0.0, x=0.225,y=0.1125) hexaferrite successfully prepared using the conventional ceramic route. The structural, optical, electrical, and magnetic properties were analyzed via X-ray diffraction, scanning electron microscopy, diffuse reflectance spectroscopy, complex impedance spectroscopy, and vibrating sample magnetometer. The structural analysis (Rietveld Refinement) revealed that all the samples exhibit magnetoplumbite hexagonal crystal structures with P63/mmc space group. At the same time, their increase in grain size and the bandgap energy showed evidence of dependency on Co3+ -Ti4+ content in SrFe12O19. The impedance and modulus spectra showed the suppression of surface charge polarization with substituting Co3+ -Ti4+ ions and cocontribution of the grain and grain boundary effect presented by modeling the electrical processes using an equivalent circuit model. Two transition peaks were observed in the temperature-dependent dielectric constant plots, represented as Td and Tm. However, Tm is nearly frequency-independent, and only one transition peak is identified in frequency versus dielectric constant plots. The temperature Td is due to dipole relaxation, whereas Tm is assigned as dielectric phase transition, modeled by modified Curie-Weiss law. Further, the AC conductivity was examined by Jonscher's powder law and random free energy barrier model, showing that the AC conductivity increases by increasing frequency due to electronic and overlapping large-polaron hopping mechanisms. Finally, in the magnetic measurements, a simple phenomenological model was modeled based on the Lorentzian function model, representing a transition from hard to soft ferrites in the doped Co3+ -Ti4+ SrFe12O19 with saturation magnetization of 123.66 emu/g and coercivity of 316.69 Oe.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: An efficient methodology for the prediction and improvement of multilaser shock peening on fatigue life

Speaker Name: Dawood Ahmed Desai

Affiliation: Tshwane University of Technology

Abstract:

Fatigue failures at stress raiser regions on critical components such as gas turbine engine shafts is becoming an area of great concern. Consequently, techniques to minimize these stresses and improve their fatigue life has become a field of active research. Laser shock peening is an effective and popular method where compressive residual stresses are introduced on the stress raiser regions of such components. Currently, numerical models have been developed for single laser shock pulses. However, reliable numerical models employing multiple laser shocks, as experienced in practice, applied to these stress raiser zones on real components is under-researched and very limited in the literature. A possible reason for this can be attributed to the substantial numerical expense associated with such multi-impact simulations using conventional approaches.

Hence, this work attempts to predict the stress and subsequent fatigue life at the fillet radii zone on a real high-speed gas turbine engine shaft subjected to multiple laser shock pulses by developing a computationally-efficient numerical model to mimic the multi-laser shock process. A modified laser shock peening simulation technique for effective prediction of the residual stress field is developed based on the finite element method. Subsequently, the fatigue life due to laser shock peening is computed.

Interestingly, the results showed considerable promise depicting that the developed numerical model produced similar residual stress profiles at a substantially reduced numerical cost of over 68% when compared to conventional approaches which were quite expensive. Furthermore, the fatigue life predictions revealed an exceptional improvement of 553% due to the laser shock peening operation, which is comparable to similar findings in the literature. Hence, it may be stated that the developed numerical model using the modified approach can be an effective tool for fatigue life prediction and investigations of





ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Development and Performance analysis of Microwave Planar Sensor for Food Quality Assessment

Speaker Name: Kalindi Shivaji Shinde

Affiliation: Sardar Vallabhbhai National Institute of Technology

Abstract:

The food industry has completely changed as a result of microwave sensor technology, which offers quick and non-destructive ways to measure food quality characteristics. Indepth analysis of the design and simulation of a flat microwave sensor created especially for the food industry is provided by the current study. The creation of a reliable and reusable ring resonator sensor for the L (1-2GHz) and S (2-4 GHZ) microwave frequencies is first thoroughly reviewed in the literature. Following that, a simulation of a microwave planar sensor with various geometries and dimensions was carried out with the CST and HFSS Simulation tool, and the final dimensions were determined to have a maximum return loss of -20.177 dB at 2.377 GHz. On a FR4 substrate material with a Cu thickness of 0.4 mm and a substrate height of 1.6 mm, the structure was simulated. By varying the material with their various dielectric permittivities from 1 to 34 for a variety of food simulations were performed shift in the samples, these to see resonant frequency. Following that, an electromagnetic performance analysis is carried out to investigate the dielectric properties of various food samples, offering information about how well the sensor detects electromagnetic signals. Sensitivity and linearity evaluations demonstrate the sensor's accuracy in identifying subtle variations in food characteristics, making it a viable instrument for in-the-moment monitoring and quality assurance. In conclusion, the study's limits and the potential for further research are defined. These aspects are critical in boosting innovation in sensor technology throughout diverse industrial sectors.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Characterization of Polyhydroxyalkanoate films and its application

Speaker Name: Shina Gautam

Affiliation: Harcourt Butler Technical University

Abstract:

Plastic is considered to be one of the unending problems of pollution in all over the world. There is no place on earth where it is not reached. To overcome this condition polyhydroxyalkanoate (PHA) can be an alternative which is a biodegradable polymer and can be degraded by itself in soil. It may pose a positive impact on environment depending on the replacement volume of the petrochemical based polymer. In the present work PHA had been extracted from a waste stream of a process industry. PHA extracted was further analyzed for its properties such as functional groups, molecules present as well as its thermal and mechanical stability. PHA was found to be thermally stable than the standard PHA formed from glucose as well as its mechanical strength was also at par with standard HDPE and LDPE. Molecular weight of the polymer was 2.8x105 Da. Further, biodegradability of the PHA films was observed for its degradation in soil. It was observed that as the composition of PHA was increased it can extend its degradation upto 8 weeks. However, if the application of this composition is considered in the packaging films which are of single use, it is quite acceptable for the PHA degradation. PHA films were also tested for the antimicrobial behavior if exposed to the environment and common pathogens to humans were found to be non-permeable to the films. The application of the PHA films were found for food packaging containing different substance like alkaline, acidic or hydrated food.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: H2 production from polyethylene terephthalate microplastics via photocatalysis with NiCo/MnO nanocomposite

Speaker Name: Delia Teresa Sponza

Affiliation: Dokuz Eylül University

Abstract:

During H2 production from plastics, advancement in the pyrolysis-catalysis conversion of waste plastics is currently limited by three problematic issues, namely lack of efficient catalysts, ambiguous catalytic mechanism, and identification of a dedicated application of carbon nanocomposites. In this study H2 will be produced from waste polyethylene terephthalate microplastics with dehydrogenation during photocatalysis with NiCo/MnO nanocomposite. The physicochemical analysis of generated nanocomposite was investigated by XRD, SEM, FTIR and HRTEM analysis. The effects of some operational conditions time. nanocomposite concentration, polyethylene terephthalate (concentration) and environmental factors (sun light power, pH, temperature) On H2 production will be investigated.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Multiresolution Analysis for Parkinson's Disease Detection

Speaker Name: Thasleema T M

Affiliation: Central University of Kerala

Abstract:

Parkinson's disease (PD) is a neurodegenerative disorder that primarily affects the central nervous system and gradually deteriorates the neurons. Early and accurate detection of PD is essential for its effective management and therapy. To accomplish this, researchers have looked into the potential of speech analysis as a non-invasive method to distinguish between those with PD and healthy controls. This paper aims to develop a method to detect Parkinson's disease (PD) using Wavelet feature (DetParWav). The multiresolution analysis nature of wavelet features would help to detect the disease in powerful way. The extracted features are applied for dimensionality reduction using Principal Component Analysis (PCA). Mutual information gain. It was then applied with Mutual Information Gain to calculate the dependence between two variables. Then reduced feature subsets are evaluated using SVM RBF and Decision Tree and obtain the highest accuracy of 91.01% and 88% respectively. The experimental analysis shows that these approaches provide reliable computational tools for accurately detecting the presence of Parkinson's Disease (PD).



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

>>FEATURED TALKS <<

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: A Real Time Landslide Monitoring System in a Disaster Prone Area

Speaker Name: Pradeep Singh Rawat

Affiliation: DIT University

Abstract:

In the current era of computing, communication, and technology, hydrological, metrological, and geographical parameters supported by sensor-based systems are available to detect, monitor, and analyze natural disasters like landslides. The landslide-related information from the study area is collected in ofine mode through site visits. This process of collecting data in ofine mode may cause delays in prediction and proactive decision-making in real-time mode. Although landslides cannot be prevented, their impact on human life and the environment can be reduced through realtime monitoring and prediction using IoT, Cloud, and Machine Learning Technologies. This manuscript aims to present a robust, real-time monitoring system that can minimize losses and save lives. The proposed model utilizes Internet of Things (IoT) technology integrated with cloud services to monitor and analyze landslides in a specifc study area. The realtime monitoring system relies on three types of parameters: hydrological, meteorological, and geographical. These parameters are used to collect and store real-time information in an IoT cloud platform. The IoT cloud information is fetched on the LANDSLIDE MONITOR application for proactive decisions. To predict landslide events in areas prone to disasters, supervised learning classifers were employed. The prediction analysis takes into account meteorological, hydrological, and geographical factors. The efectiveness of the proposed real-time landslide monitoring system was tested and evaluated in the Varunavat hills of the Uttarkashi District in Uttarakhand, India. The performance of the system was assessed by analyzing the accuracy of the model at diferent levels. The major focus of the developed system includes realtime data storage of landslide-prone areas in the IoT cloud, predictive modeling, and lastly the real-time landslide responses on LANDSLIDE MONITOR. The present landslide monitoring system uses long short-term memory networks (LSTM) and gated recurrent units (GRU) for predictive modeling of the landslide events in the study area. Hence the unique contribution of the work includes the technologies integration and real-time data collection from the study area and stored in the IoT cloud. The novel contribution of the work also includes the predictive modeling of landslide events using LSTM and GRU, and study area people awareness using LANDSLIDE MONITOR for level of risk from landslide events. The accuracy rates for the alert classes, 'no threat', 'mild threat', and 'high threat' events are 96.83%, 97.07%, and 98.56%, respectively. With a mean F1 score of 0.96 across the three classes of landslide occurrences, the proposed system demonstrates a high level of accuracy

Table 1. Comparison of Proposed System with Existing State of Arts Techniques in Landslide Monitoring

Received mail.	ML octavaer (Lineality)	Calend	Lasestate remaindeber	Haltomana classics As La	sinik o	uistrin a	a second second
			Personal	21 spar	PAGE	Ge alatio mptu	Pristan
"Bud, disc intercence of performed interfalse using 14" excitations basing to resear character to resear	Batton Barek Jappan Kome Richts, Lapan Acamata	Varia Aluri Vili II. Sera optici	for monor contra overcast targenies regenera ad prings	1.11 (no. Root) 1.11 1.12 1.12 1.12 1.12 1.12 1.12 1.1	LANT		ACE another (grow der) Private state (scher der) PA Met Anne out an
"If" recoil Early Warring Notices to Londitics Eleaster Receptores Ling Unders Longing Approximation (2011)	Anthroad Scenard Associate	Tinnan linni kloplalapi. Taaba	Raidel, begennen och sconnar, artfanktond land ceret	CM instit filosi (price like); E-12; Egit Reserved des:		6.827	0.07 seedens) ryses 4000 0.01 seedense galles deel 0.07 lagt daan tool ges
Surgission of laboral of Thispeand Marine Logistary in Logistic Publicies: Afforder 16 work 2003	Hereick Tee, Kastler Herei, Kasserreiche An zur Besper Verse Maltin	Yanan Akato Yan (d. Janar ngirot)	Great the art top open typesty and but articless	6.11 Inc. Book 6.12 publichour (pillor dat) 6.12 http://focustical.alury	and the	6.821	And particular (game anal) 1930 and a first radius along 100 and descended and
"Interpreting fold and Machine Landmig Defenses for Landmin Receptivity Magning in Despiring Mandrage Instar' (Depire 20, 2011)	Region Represent Resider-Aread Toppen System Machine, Areal and Machine, Areal and Machine Merculik	Drawt two Danning Head on Indi	Bys operations. Weby cellsday? and control	CO2444 Board CO244globarariani chery	Later		Bir sodeni)(pro dot) Bir soler)asi (ples det) bir lap dasi polasi
"Id food Landow ends Wanter Space etals Manter Engine and signs for fail Disease Mangement "Mane et al. 2010	Classes Tee, Rastin Parja, Rasperregi- ina, and Supportions Radius	The same time (dephates) Table	Readed Amprovery Introduction of London Control	6.17 too Bone), K 29 kg/-mearies.com		2.24	199 andreas (press area) 199 andrease (prime alos) 199 and inconstruction
Property Section 197	LIPHONE	Palicated Bala on (Bala) Ana Uhar oxistes	Nucleosal, polog- cal, and sector depical previation trades. https://www.inter.	 NY Star Board, NY problematic (prilow sheet) NY 	MBH		NV sacilizations also) NV sacilizasi(poles dire)

ADV. MATERIALS SCIENCE 2025



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Study of morphological and anthropometric features of human ear ossicles

Speaker Name: Nirmala Mahadeo Yamagar

Affiliation: Vasantrao Pawar Medical college & Research Centre

Abstract:

Aims and Objectives: To study the morphology and anthropometry of human ear ossicles from cadaveric temporal bone and to study the variations of the human ossicles from ossiculoplasty point of view.

Material and methods- 38 sets of ear ossicles were collected, each containing malleus, incus and stapes, from temporal bone dissection done in Vasantrao Pawar medical college, Nashik. They were studied under microscope & anthropometrical, morphological evaluation done.

Result- Malleus showed variations in handle where 61% were straight and 39% curved. Weight of malleus ranged from 0.03-0.06gram. The length ranged from 5.5-8.2mm. Incus showed morphological variation in lenticular process which was present in 73% incii. Weight of incus ranged from 0.04-0.09grams, average length of long process 3.5mm, width of body 4 mm. In stapes variations was seen with head of stapes which was absent in 21% bones.

Conclusion- With increasing awareness about postoperative hearing status, this study will add up in knowledge of morphological and anthropometric variations that exists in Indian population, help otologists to understand middle ear dynamics better which will improve results of ossiculoplasty.



ADVANCED MATERIALS SCIENCE WORLD CONGRESS

MARCH 24-25, 2025 | LONDON, UK

SUBMIT YOUR ABSTRACT NOW

Speaker Slots Filling Quickly

Title: Heating efficiency and In-Vitro cell viability of superparamagnetic nanoparticles for magnetic hyperthermia applications

Speaker Name: M.K.Shobana

Affiliation: Vellore Institute of Technology

Abstract:

Superparamagnetic ferrite nanocomposites are extensively employed in biomedical applications specifically in magnetic hyperthermia therapy owing to their enhanced heating deportment. The combination of nickel ferrite (NiFe₂O₄) and magnetite (Fe₃O₄) nanocomposites showed enhanced heating efficiency with superparamagnetic behavior, which is essential in hyperthermia therapy. These nanoparticles were synthesized by a chemical co-precipitation technique independently and were composited through a solidstate synthesis process. The structural analysis was undergone through the X-ray diffraction (XRD) technique and showed an average crystalline size of around 20 nm with a cubic spinel structure. Further, the magnetic properties reveal that the nanocomposites exhibit very low coercive (H_c) values around 17 Oe, revealing the uniaxial anisotropy with good saturation magnetization (Ms) (41 emu/g). The heating performance of the samples was investigated through an AC induction heating system and an infrared thermographic (IR) camera. The IR camera was used to capture the heating rate of the prepared nanoferrite through thermal images. The AC induction heating system with a fixed magnetic field was below the safety limit (product of the applied amplitude and frequency). The heating rate of the samples was calculated by the specific absorption rate (SAR) and was found to be around 414 W/g. Consequently, the prepared nanoferrites were treated with A549 lung adenocarcinoma and HEK normal cells to check their cell viability. The selectivity index of about 3.3 was observed with the lung cells and showed excellent antiproliferation properties. As a result, the prepared nanoferrite samples significantly contribute as a potential material for magnetic hyperthermia applications.



SPEAKER'S TESTIMONIALS

ADV. MATERIALS SCIENCE 2024

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



Benedetto Di Ruzza

University of Foggia, Italy

Thank you so much to you and all your staff for the excellent work all of you have done in preparing this conference.

I really found the Adv. Materials Science 2024 extremely interesting event and full of ideas for my work and my activities.

I found the quality of the selected talks excellent.

This conference is contributing to my professional development because I found a lot of ideas in the talks I have seen.

Peers Alley Media, thank you so much for your work.



Roberto Alejandro Rojas Holden

Universidad Nacional de Asunción, Paraguay

I would like to thank the organization of Peers Alley Media for a great Congress where every speaker was accurate in their research, the timing was also very good.

Starting from the selection of Speakers, the previous requirements for being a speaker, the selection of the Chairs. I was honoured by that and because of the quality of the speakers, their curriculum, and the way the Congress was conducted.

I would like next to be at the next congress organized by Peers Alley Media, thank you very much.



Figen Aynali

Aldechem Chemical and Purification Technologies, Turkey

I was very pleased to attend the Adv. Materials Science 2024.

Many topics were different from the field I was interested in, but it was good for me to listen to studies in different fields. It was enjoyable to meet people who are experts in their fields. Each speaker had prepared his presentation carefully.

There were just so many speakers that it was tiring to listen to them all.

The congress atmosphere was warm and friendly. It was easy for participants to communicate. If I were looking to do research in a different country, this congress could offer an opportunity.

Peers Alley Media, Canada did a good job in selecting right speakers for Adv. Materials Science 2024.



Fidan Ahmadova

Baku State University, Azerbaijan

The Materials Science 2024 Conference contributed greatly to the professional development of the participants by providing them with the latest research and innovations in the field of materials science.

The topics covered at the conference included a wide range of topics, such as nanotechnology, polymer science, electronic materials and energy storage.

The sessions were attended by leading experts in the industry "It was full of interesting presentations and panels presented by. This event allowed the participants to update their knowledge and follow the developments in the sector."

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



Anjali S. Bhalchandra

Government College of Engineering, Aurangabad, India

Adv. Materials Science 2024 was a wonderful event. As I mailed you, we wanted to attend this event in offline mode but due to some unavoidable circumstances we could not make it. We attended in online mode. But nowhere we felt that, we missed something.

It was well organized event. Speakers were excellent, giving a good insight for further research.



Suman Mukhopadhyay

Indian Institute of Technology Indore, India

Thank you very much for the opportunity to participate in Adv. Materials Science 2024. It was more satisfying experience for me for couple of days interacting with scientists and technologists all over the world.

Thanks and regards!



R. Manivannan

National Institute of Technology Raipur, India

The quality of talks at Adv. Materials Science 2024 was EXCELLENT.

The talks provided me with deep insight into various research fields of Materials Science.

There is no doubt about it, Peers Alley Media did a Good Job.



Suvankar Biswas

Indira Gandhi National Open University, India

Thank you for giving opportunities to participate in this wonderful event.

It will help the science community to collaborate with each other. All the speakers were really good.

A special thanks for giving me the opportunity to share my work with all the participants at Adv. Materials Science 2024.



Jasdeep Kaur

Indira Gandhi Delhi Technical University for Women, India

It was an honor and pleasure to be part of 6th Edition of Advanced Materials Science World Congress (Adv. Materials Science 2024).

Adv. Materials Science 2024 had very good research papers/areas content/diversified from various scientific areas.

Genuinely good research has been put in by the authors and the papers presented were very informative.

Professionally, I have gained insight from the abstracts and upcoming areas of research where I can venture and look forward to work with my research scholars.

The Adv. Materials 2024_Final Virtual Book and Adv. Materials 2024_Virtual Scientific Program are a great documents prepared with minute details and are great reference testimonies for the success of the Congress.

This was a truly international conference with speakers across the globe, from various familiar institutions and great researchers. Good thought-provoking sessions were held which kept us engrossed throughout the two days.

It was a pleasure being part of this conference. I look forward to remaining associated and sometimes in-person too.



Varsha Usha Vipinachandran

Vellore Institute of Technology, India

I considered this event Adv. Materials Science 2024 as one of my greatest achievements in my life.

The event was very nice and each speaker were presented their work very nicely.

I appreciate peers alley media to take such a hard event to be successful for two days of conference.

Thank you for considering me to be a part of this event.

Thank you so much.



Anita Verma Kalinga University, India

Congratulations to Organizers for completion of this 6th Edition of Advanced Materials Science World Congress (Adv. Materials Science 2024).

It was a nice experience and it has given us a platform to communicate, collaborate with all over the world eminent researchers and scientists.

Thank you again for giving me this opportunity to participate as a speaker in this wonderful event.



Debraj Chakraborty

Swami Vivekananda University, India

To the best of my knowledge, this conference (Advanced Materials Science World Congress-2024, Peers Alley Media, Vancouver, Canada) has opened a new domain of colorful sensation in my experience. I am really grateful to you all.

The quality of talks at Adv. Materials Science 2024 are really commendable.

Hats-off to Peers Alley Media, Canada



Dragana R. Mihajlović University of Belgrade, Serbia

Thank you for your invitation to participate Adv. Materials Science 2024. It was a pleasure to listen to the lectures of colleagues from different parts of the world and to share our results and experience. The selection of lecturers and topics was excellent.

The organization was excellent, and I hope that in the coming years I will have the opportunity to participate in conferences in your organization.

Lectures on the topic of coatings in various applications, as well as lectures on ecology and solar energy were extremely interesting, and I would single them out as something that I wanted to hear.



Wurood Asaad Midab Ministry of Electricity, Iraq

l appreciate you so much and am delighted to attend Adv. Materials Science 2024.

All of the papers in our session were excellent, and I found the speaker's arrangement to be interesting.



Hossein Robatjazi

Shahrood University of Technology, Iran

The quality of the talks was at Adv. Materials Science 2024 good level.

The selection of topics and speakers was very good and appropriate, and also it made's people familiar with different topics and fields of work and can help many people in choosing their future career and education.



Sadegh Banitalebi

Imam Hossein University, Iran

I am happy that I was able to participate in this great scientific event Adv. Materials Science 2024 two years in a row.

The result of my evaluation of the quality of talks was good.

Undoubtedly, the presence of researchers in such an event is effective in their professional development. I understood this in the two years that I participated in this event.

The selection of the scientific committee as well as the scientific speakers of this event was done with admirable precision and made the participants happy.

I appreciate the efforts of your Excellency and other colleagues.



Moulay Sadiki Ibn Zohr University, Morocco

Adv. Materials Science 2024 was a good quality and high-level event. In fact, I had an unforgettable stay during this congress. All the talks were very scientifically interesting and enriching. And that has a positive effect on my professional career.

Therefore, I warmly thank the Peers Alley Media for its good job and for this very interesting scientific event.



Mouhcine Yachi

Chouaib Doukkali University, Morocco

Thank you for your kind message. I thoroughly enjoyed participating in the 6th Edition of Advanced Materials Science World Congress (Adv. Materials Science 2024). The quality of talks exceeded my expectations, providing valuable insights and fostering engaging discussions.

Regarding my professional development, the event proved highly beneficial. The diverse range of topics covered, expanded my knowledge base and offered new perspectives, enhancing my expertise in the field of materials science.

Peers Alley Media, Canada did an excellent job selecting speakers for thought-provoking sessions. The lineup was impressive, contributing to the overall success of the event.



Hauwa A. Rasheed

Nile University of Nigeria, Nigeria

I would like to express my appreciation to you for being part Adv. Materials Science 2024.

I'm glad to tell you that it was productive and insightful.

The talks were of high quality, and it's great to know that I learned new things even though most of the areas weren't my research focus.

Peers Alley Media, Canada did an excellent job selecting the speakers and organizing the event.

I look forward to the next edition.



BENAMARA Ahmed My Ismail University, Morocco

Greetings!

Allow me to thank you first of all for inviting me to participate in this Adv. Materials Science 2024 congress for which you have thought both of promoting scientific research and, also, of the convenience of the event, the accommodation of the participants and conferences were held in the same location, which helped facilitate presentations.

Regarding the quality of the discussions, the vast majority of the works presented were up to the standard of the event. The themes were numerous and several recent techniques were presented with interesting and encouraging results, which reflected the quality of the presentations which was excellent and convincing.

Participating in this congress is an enriching experience for my research prospects by undertaking studies using more recent techniques. It is also profitable on the professional side, particularly with regard to the organization of scientific events in my country.

Honestly Peers Alley Media, Canada did a good job in choosing these speakers.



Oluwaseun Kayode Ajayi

Obafemi Awolowo University, Nigeria

The speakers were drawn from various fields and scientific backgrounds. The researches presented showed impressive works going on in different quarters and they contributed to the body of knowledge for all participants.

The topics and method of work in the various presentations gives a new direction of possibilities and more insight into deeper research strategies. New skills were acquired which would be channeled to further research activities learning from the speakers.

Speakers were selected from a wide spectrum of academia: experienced, young researchers and students. The mix is very appropriate.

Thank you for the opportunity.

NETWORKING... CONFERENCING... FOSTERING

Attending a Conference isn't all about Learning and Networking

DISCOVERING

A right choice of conference destination is an important aspect of any international conference and keeping that in consideration, Adv. Materials Science 2025 is scheduled in the Beautiful city "London'.



British Museum



Buckingham Palace



Greenwich and Docklands



Hampton Court Palace

Palace of Westminster



Kew Gardens



Tower Bridge London



National Gallery

The London Eye

SPONSORS/ MEDIA PARTNERS





Peers Alley Media

827 E 51 Ave East, V5X1E4, Vancouver BC, Canada WhatsApp No: +1(506)909-0537 Contact us: materialsscience@researchleap.org

ADV. MATERIALS SCIENCE 2025

CONNECTUS

