6TH EDITION OF INTERNATIONAL CONFERENCE ON

MATERIALS SCIENCE AND ENGINEERING

Shaping Future by Combining Knowledge and Innovations in Material Science



Our OCMs



EPHRAIM SUHIR
Portland State University,
United States

Scientific TOPICS



THOMAS J WEBSTER
Interstellar Therapeutics,
United States



NICO FELICIEN DECLERCQ
Georgia Institute of Technology,
United States



YONG TENG Emory University, United States



ERIC BUHLER
The University of Paris,
France



PAULO CESAR DE MORAIS Catholic University of Brasilia,

· Ceramics, Engineering Materials and Composite Materials

- Mechanics, Characterization Techniques and Equipments
- Batteries and Solid Electrolyte Materials
- Environmental and Green Materials
- · Computational Materials Science
- Materials Science and Engineering
- Nanomaterials and Nanotechnology
- · Failure Analysis and Prevention Techniques
- Plastics and Elastomers

- Coating and Surface Engineering
- Magnetism and Multiferroism
- Structural Materials and Metallurgy
- Biosensors and Bio Electronic Materials
 Optical, Electronic, Magnetic Materials and Plasmonics
- Emerging Smart Materials
- Biomaterials and Medical Devices
- Applications of Metallurgy, Minerals and Materials Science in other fields







Keynote Presentations (In Person	
Mark Rainforth The University of Sheffield, United Kingdom	Title: Enhancing strength and ductility in a near medium Mn austenitic steel via multiple deformation mechanisms through nanoprecipitation
Huang Weimin Nanyang Technological University, Singapore	Title: Rapid manufacturing anywhere, anytime
Nasimuddin Institute for Infocomm Research, Singapore	Title: Revolutionizing antenna technology: A comprehensive overview of electronically tunable material-based beam-steering structures
R.S. Damse Ministry of Defence (DRDO), India	Title: Waterproofing materials for ammonium nitrate
Keynote Presentations (Virtual)	
Ephraim Suhir Portland State University, United States	Title: Analytical modeling occupies a special place in reliability physics predictive modeling effort
Yong Teng Emory University, United States	Title: In vivo delivery of CRISPR Cas9 using lipid nanoparticles enables gene depletion to enhance immunotherapy in cancer
Thomas J Webster Interstellar Therapeutics, United States	Title: The merging of artificial Intelligence and biomaterials: The future of personalized health solutions
Vistasp M Karbhari University of Texas Arlington, United States	Title: Combined moisture and stress effects on durability of composites
Paulo Cesar De Morais Catholic University of Brasilia, Brazil	Title: Antibacterial activity of copper-doped metal oxide nanoparticles
Eric Buhler The University of Paris, France	Title: Supramolecular materials integrating molecular machines and motors: Structure probed using scattering techniques (small-angle neutron and X-ray)
Oral Presentations (In Person)	
A. C. Matin Stanford University School of Medicine, United States	Title: mRNA-based systemically delivered directed gene therapy using nanomaterials
A K Fazlur Rahman Oklahoma School of Science and Mathematics, United States	Title: Nucleophilic Addition Reactions to d9 Metal (Co, Rh, Ir) Stabilized Carbocations

Jaroslaw Milewski Warsaw University of Technology, Poland	Title: Molten borates fuel cells - Mathematical modeling and identification of performances
Leila Momenzadeh The University of Newcastle, Australia	Title: Molecular dynamics simulation of Yttria-stabilized zirconia: Investigating the influence of Yttria and oxygen vacancies concentration on physical properties
Guanglang Xu Karlsruhe Institute of Technology, Germany	Title: On the concept of CP parameter and its application in the analysis of scattering phase functions
Antonio Pantano University of Palermo, Italy	Title: Natural fibers composites: Nanoparticles as reinforcing agent for improving performances
Sirine Benkhemis CEA, France	Title: Diamond-based active antireflective optical windows with self-cleaning properties
Hitoshi Ozaki Mie University, Japan	Title: Dissimilar metal joining of magnesium alloy and aluminium alloy by laser roll welding
Li Wenting Singapore Institute of Manufacturing Technology, Singapore	Title: Development of advanced robotic incremental sheet metal forming processes
Ketut Gary Devara Gyeongsang National University, Korea, Republic Of	Title: Increased Sensitivity of 2D Materials MXene for Gas Sensing Application by Biopolymer Lignin Hybridization with Zero Bias Operation
Namhun Kwon Korea Institute of Industrial Technology, Republic of Korea	Title: A study on highly efficient Nickel-Iron alloy Sulfuric Acid leaching through anodize electrolysis process
Waqas Ul Arifeen Yeungnam University, Republic of Korea	Title: Novel method for fabrication of separator/electrolyte for lithium metal batteries
Yiting Lei Chongqing Medical University, China	Title: Injectable hydrogel microspheres with self-renewable hydration layers alleviate osteoarthritis
Li Tianyu Hohai University, China	Title: Resource utilization of sea sand - Research and development of ultra-high performance cement-based materials
Jianqiang Zhou Northwestern Polytechnical University, China	Title: Numerical characterization of shot peening induced strain hardening gradient and prediction of residual stress
Tongwei Anhui University of Science and Technology, China	Title: Study on the mechanism of temperature- and stress-induced martensitic transformation
Daining Fang Beijing Institute of Technology, China	Title: Smart materials and structures: From 3D to 4D printing
Liangli University of Science and Technology of China, China	Title: Achieving superplastic TWIP steel welded joint via vacuum electron beam welding

Milos Janecek Charles University, Czech Republic	Title: Phase transitions in metastable Ti15Mo alloy
Michal Knapek Charles University, Czech Republic	Title: In-situ insights into micron-scale plasticity
Suresh C. Ameta PAHER University, India	Title: Photocatalysis: A promising technology
Suresh Prasad Singh National Institute of Technology Rourkela, India	Title: Hydromechanical properties of biopolymer treated pond ash
Sangeeta Tiwari Amity University Noida, India	Title: Designing of composite core shell structured materials with multifunctionality for efficient wastewater treatment
Sonia Baba Mastnath University, India	Title: Investigating the structural, optical and nonlinear properties of L- histidine phosphite single crystal
Vineeth Sasikumar Kala Indian Institute of Technology Delhi, India	Title: A quasi-solid state polymer electrolyte for high-rate and long-life sodium-metal batteries
Ravi Mahla National Institute of Technology, India	Title: Mixed convection jeffrey fluid flow between rotating discs under the influence of magnetic field and thermal radiation using ann-based computational approach
Datla Neeraj Varma National Institute of Technology Rourkela, India	Title: Mechanical behavior and environmental impact of slagwaste glass binary geopolymer
Sirshendu Guha Engineers India Limited, India	Title: Entropy creation, waste work and thermodynamic efficiency of Galvanic Cells: Effects of discharge current and environment temperature
Mukul Srivastava IIT Kanpur, India	Title: Critical assessment of the multi-functionality of CNT reinforced CFRP composites
Dan Sathiaraj Indian Institute of Technology Indore, India	Title: Twin wire Arc additive manufactured non equiatomic Co50Cr10Ni40 medium entropy alloy
Poonam Suresh Deshmukh Indian Institute of Technology Indore, India	Title: Effect of Co-content on microstructure and phases of laser additive manufactured Cox(CrNi)100-X medium entropy alloy
Arvind Kumar Chaman Lal (Government Aided) Mahavidhayalaya, India	Title: 1D Si-hybrid heterostructures for improving the Photodetector performance
Piyush Verma Institue of Nuclear Medicine And Allied Sciences (INMAS), India	Title: Luminescence insights to binding interactions of graphene oxide with pepsin: A spectroscopic and molecular docking approach
Ayushi Mishra Babasaheb Bhimrao Ambedkar University, India	Title: Magnetic Lagenaria siceraria Biochar for dye removal from waste water stream: Green and economic approach

Sandeep Rathee NIT Srinagar, India	Title: Microstructure and mechanical properties of Al-5052/NiTi surface composites fabricated via friction stir processing
Lajpreet Kaur Institute of Nuclear Medicine and Allied science, India	Title: Synthesis and physicochemical characterization of tannic acid encapsulated BSA nanoparticles: From structural analysis to bioactivity assessment for enhanced drug delivery
Ajit Kumar Meikap National Institute of Technology Durgapur, India	Title: W-WO3 mixed phases for enhanced supercapacitor electrode performance
Pramod Avti Postgraduate Institute of Medical Education and Research (PGIMER), India	Title: Advanced smart nanobiomaterials as emerging versatile platforms for healthcare systems
Anand Joshi Parul University, India	Title: Innovative nano strategies for electric vehicles: Enhancing energy efficiency and sustainability through composite phase change materials in battery thermal management systems
Sukalyan Dash Veer Surendra Sai University of Technology, India	Title: Remediating solvent environments using adsorption technique
Sandip Gangil ICAR-Central Institute of Agricultural Engineering, India	Title: Innovative agro-mass derived carbon for supercapacitors
Krishnam Raju IIT Bombay, India	Title: Effect of grainsize on formability of tubes of austenitic stainless steel
Niharika Metro College of Health Sciences & Research, India	Title: The utilization of polyelectrolyte complexation for sustained drug delivery
Vinayak Adimule Angadi Institute of Technology and Management, India	Title: Morphology, optical and photoluminescence properties of SM doped TeO2 Nano crystalline powders
B.K. Behera Indian Institute of Technology, India	Title: Advanced multifunctional textile structural polymeric composites and applications
Anjan Sil Indian Institute of Technology Roorkee, India	Title: Characterization of honeycomb structured carbonaceous anode material for sodium-ion battery application
Brahma Raju Golla National Institute of Technology, India	Title: A very low temperature green processing for developing high dielectric Al2O3, SrTiO3 ceramic composites
Nayaka Narasaiah National Institute of Technology, India	Title: Creep fatigue crack growth (CFCG) studies on P91 Steel
Ajoy Kumar Pandey NIT Warangal, India	Title: Zirconia based bio-ceramics - new additives
Priya Kumari AcSIR, India	Title: Evolving technologies and the essential role of coke making in Indian perspective

Abdulmohsen Albedah King Saud University, Saudi Arabia	Title: Characterization of micro biocomposite based on co- polypropylene filled with oyster shell particles
Louis Charl Coetzee University of South Africa, South Africa	Title: The correlation between electron-hole separation in a compound and its efficiency for theoretical testing
Keegan Zass Cape Peninsula University of Technology, South Africa	Title: Impact of material positioning on the FSPed friction stir welded dissimilar joints
Devendra Adhikari Tribhuvan University, Nepal	Title: Thermodynamic, surface , viscous and structural properties of liquid Al-Ga-Mg alloys at initial melts temperatures
Mubarak Ahmad Khan Applied Bioplastics ltd, Bangladesh	Title: Jute fiber reinforced Fire retardant polymer composite with dynamic mechanical characteristics: an economical viable pathway to utilize natural fiber
Mubarak Ahmad Khan Applied Bioplastics ltd, Bangladesh	Title: Jute cellulose based totally biodegradable biopolymer sonali bag as an alternative for single-use plastic
Yomanfo Assoumou Joseph University of Felix Houphouet Boigny, Ivory Coast	Title: Thermal behavior of sablatex-based carpets: Influence of sand and fiber fabrics (cotton and mosquito net) on the fire behavior of rubber latex-based carpets
Naim Asha ALQuba Engieering Office, Jordan	Title: Enhancing the role of bent-up bars in shear beyond the code requirements by using plane-crack interceptor-cross diagonal form
Mohamed Ounaies LMS, Tunisia	Title: Dynamic humidity diffusion through polyester/glass fiber composite in sea water
Chien Fang Ding National Taiwan University, Taiwan	Title: Additive manufacturing of metallic structures by laserinduced forward transfer
Min Hsuan Lee Yang Ming Chiao Tung University, Taiwan	Title: The role of machine learning in organic solar cell research
Saeed Ibn Idris Kofi Yeboah University of Energy and Natural Resources, Ghana	Title: Sustainable Management of Organic food Wastes in Ghana using Vermi composting
Muhammad-Sultan Payzullakhanov Material Sciences Institute, Uzbekistan	Title: Hydrogen storage in porous Ceramic materials of Aluminosilicate composition
Gulmira Samarkand State Uniuversity, Uzbekistan	Title: Environmental condition of industrial enterprises, design of water supply systems and recovery of solid waste
ZAOUI Miloud TAHRI Mohamed Bechar University, Algeria	Title: Exploitation of dune sand from South-West Algeria In brickmaking and prefabrication

Ala Eddine Lakhdari Scientific and Technical Research Center in Arid Regions (CRSTRA), Algeria	Title: The use of Eddy current skin effect phenomena to nondestructive evaluation of materials thickness and the position of materials shortage hidden defect
Tafraoui Ahmed TAHRI Mohamed Bechar University, Algeria	Title: Chemical and mechanical properties of ceramic products based on chamotte clay from southwest Algeria
Lawan Umar Grema Ramat Polytechnic Maiduguri, Nigeria	Title: The effect of modifiers on structural and thermophysical behaviour of aluminoborosilicate sealing glasses for SOFCs applications
Reminus Okah Port Harcourt Polytechnic, Nigeria	Title: Phytoremediation of some trace metals in polluted water using duckweed and water lilies
Qutaiba Alasad Tikrit University, Iraq	Title: Emerging transistor, SiNW, in hardware security

Oral Presentations (Virtual)

Frederick H. Silver Rutgers University, United States	Title: Viscoelasticity of synthetic polymers and soft tissues using VOCT
William Skene Universite de Montreal, Canada	Title: Reversibly Modifying the Properties of Sustainable Devices Through Reversible Covalent Bonds
Asif Zaidi University of Waterloo, Canada	Title: Hydrogen Molecule: Estimation of ground and excited electronic states
Trevor Hodgkiess University of Glasgow, United Kingdom	Title: Comments on the durability of GRP in seawater under zero load, constant stress and erosive loading
Abdeen Omer Energy Research Institute (ERI), UK	Title: Low energy buildings design and human comfort solutions
Jerzy Kisilowski Retired, Poland Rafał Kowalik Military University of Aviation, Poland	Title: Wear and tear of turnout components and wheels of a rail vehicle moving at high speed (V>200 km/h)
Michał Gdula Rzeszow University of Technology, Poland	Title: Tool wear, chip and machined surface morphology and new model approach in multi-axis milling process of Ni-based superalloy using the torus milling cutter
Cinzia Maspero University of Milan, Italy	Title: 3d printing of aligners: Current methodological possibilities for the orthodontist and dental laboratory
Elaheh Mohebbi Marche Polytechnic University, Italy	Title: Copper-based hot electrons and high-efficiency I(V) characteristics generated by VSe2 nanodiode
J Iván Escalante-Garcia Cinvestav Saltillo, Mexico	Title: Turning waste concrete into sustainable alternative alkaline cementitious materials

Carlos Camurri University of Concepcion, Chile	Title: superficial grain refinement of 316L stainless steel through rolling with rough rolls
Osman Adiguzel Firat University, Turkey	Title: Shape reversibility and fundamental characterization of shape memory Alloys
Vasily Lutsyk Institute of Physical Materials Science, Russian Federation	Title: Spatial 3D computer model of Isobaric phase diagram as a digital passport for the materials within Ag-Au-Sb system
Alexander Valyaev Nuclear Safety Institute RAS, Russian Federation	Title: Application of nanotechnology for treatment of human bone joints with severe injuries
Omar M. D. Shakarneh Novosibirsk State University of Architecture and Construction, Russian Federation	Title: Numerical modeling of stress-strain state in masonry, unreinforced masonry and masonry reinforced with reinforcement meshes
Mukhamed Khavpachev Moscow Institute of Physics and Technology, Russian Federation	Title: Iodophor based on polylactide/polyvinyl alcohol blend prepared via environmental crazing
Yu. K. Mashunin Far Eastern Federal University, Russian Federation	Title: Materials science, engineering of selection of optimal parameters of material structure based on theory and methods of vector optimization
Zobnin Boris Borisovich Ural State Mining University, Russian Federation	Title: New technology for processing acidic mine waters
Vladyslav Cheranovskii V.N. Karazin Kharkiv National University, Ukraine	Title: The decorated spin ladder systems: peculiarities of the energy spectrum and magnetization profile
Yuting Liu Harbin institute of technology Shenzhen, China	Title: Cryogenic in-memory computing using giant and tunable anomalous hall effect in magnetic topological insulators
Nong Wang Lanzhou Jiaotong University, China	Title: Preparation and properties of intelligent coating materials for oil-water separation with reversible double stimulus response
Meng Zhu Sichuan Normal University, China	Title: Robust superhydrophilic and underwater superoleophobic membrane for oil-water separation and water purification
Yulai Zhao Fuzhou University, China	Title: Porous carbon based composites for energy storage via high internal phase emulsion template
Fang Chen Nanjing University of Chinese Medicine, China	Title: The effect of ion doping on the properties of ferrite ferrofluids
Tong Zongwei Tianjin University, China	Title: Lightweight Si3N4@SiO2 ceramic foam for thermal insulation and electromagnetic wave transmission

Vladimir Chigrinov The Hong Kong University of Science and Technology, Hong Kong	Title: Photoaligned azodye nanolayers: Physics and applications for new liquid crystal devices
Li Ma The Hong Kong Polytechnic University, Hong Kong	Title: Personalized nanofiber-based strategy for smart regulation of diabetic wounds
Subramanian Uma Maheshwari Mother Teresa Women's University, India	Title: Electrospun nanofibers as a potential biomaterial for bone tissue regeneration application
Sagar K G Cambridge Institute of Technology , India	Title: Plastically deformed AL2024 Beryl composites for better mechanical and wear characteristics
Siva Subramanian Palanisamy P T R College of Engineering and Technology, India	Title: Influence of fiber content and length on the mechanical characteristics of biocomposites comprising natural rubber Reinforced with Sansevieria Cylindrica fibers
Siva Subramanian Palanisamy P T R College of Engineering and Technology, India	Title: Evaluate the mechanical characteristics of hybrid natural fiber composites comprising ramie and flax under various conditions
Naved Akhtar Jamia Millia Islamia, India	Title: Complex variable approach in modelling the problem of multiple collinear cracks in an infinite plat
Supen Kumar Sah SRM University, India	Title: Impact of porosity distribution on free vibration and thermal buckling analysis of metal ceramic P&S-FGM sandwich plate
Kondekal Manjunatha RYM Engg.College, India	Title: Investigation of biofuel blended with ethanol in aluminium alloy piston and its performance evaluation in twin cylinder CI engine
Ram Sambhar Shukla CSIR, India	Title: MCM-41 as a potential mesoporous reference material for characterizing multi textural properties
Alexander Kalinichenko Belarusian State Technological University, Belarus	Title: Ultralight Composites for aerospace engineering
Moera Gutu Adama Science and Technology University, Ethiopia	Title: Development and characterization of the mechanical and corrosion behavior of Fe-SiC-Al2O3 composites through powder metallurgy method
Tzu-Hou Hsu Cheng Yieu Development Machinery Co., Ltd., Taiwan	Title: Investigation of the composition and morphology of hardfacing welding powder
Zakia Guezzen University of Science and Technology of Oran, Algeria	Title: Effect of natural fibers on the natural frequencies of cylindrical biosourced shells
Zakaria Boumerzoug University of Biskra, Algeria	Tile: Friction eelding of dissimilar metallic materials

Poster Presentations (In Person)

Waly Diallo Cheikh Anta Diop Dakar University, Senegal	Title: Crystal structures of some chelated magnesium containing malonate and methylph-nylsulfonate oxyanions. Characterization with IR, UV-vis and multinuclear NMR (25Mg, 1H, 13C) spectroscopies, TGA analysis and X ray diffraction analysis
Michael Alagbe Kwara State Polytechnic, Nigeria	Title: Inhibitory effects of benzotriazole and amine mixtures on the corrosion of grey cast iron in 0.1M potassium chloride solutions
M. Khodaee University of Tehran, Iran (islamic Republic Of)	Title: Effect of graphene-metal oxide composites on electrical and electro-optic properties of liquid crystals
Muhammad Mateen Afzal Awan UMT Lahore-Sialkot, Pakistan	Title: Imaging of flower pollination algorithm for optimal power extraction from solar photovoltaic system

Oral presentation slots are still open!!

roster resemucions (in reison)	
Sohal J. Sondarva Sardar Vallabhbhai national institute of technology, India	Title: Modulation of magnetic and electric properties of Cr doped Mn3TeO6 multiferroic materials
Vaishali Gupta Jawaharlal Nehru University, India	Title: Corona poled-photocatalytic coupled effect in Ferroelectric BaTiO3 nanoparticles for Enhanced dye degradation
Karishma Jain School of Sciences, India	Title: 2D MOF-Carbon nanofiber composite membrane for efficient removal of microplastics
Bernard Otchere University of Energy and Natural Resources, Ghana	Title: Enhancing agricultural advisory practices through datadriven diagnostics: A case study in the agricultural landscape of abandoned mine sites in Ntotoroso, Ghana
Bernard Otchere University of Energy and Natural Resources, Ghana	Title: Geospatial mapping and analysis of surface water demand, abstraction and availability in the Tano river basin of Ghana
Sara Khadempir Quchan University of Technology, Iran (islamic Republic Of)	Title: Boosting ethanol electrooxidation of AgSrTiO3 in the dark from the electro-photocatalytic memory effect

Ouaissa Khadija University Sultan Moulay Slimane Beni-Mellal, Morocco OTMANE Sadek Universite Chouaib Doukkali, Morocco Title: For sustainability of aquaculture in Africa with social, economic and environmental dimensions Title: DFT study on the electronic, structure, magnetic and optical properties of TiO2 anatase

Ravi Kikar Sinha Private Indian Researcher, India	Title: Can we increase cruise and cargo ship's speed to 1000 knots with the use of portable electron positron contact based engines safely?
Ravi Kikar Sinha Private Indian Researcher, India	Title: Use of vast coastal sea surface in harvesting electrical energy through floating large photovoltaic solar panels on them
Narinder Kumar Uttaranchal University, India	Title: Albendazole chemical compound behaves as liquid crystal
Zurab Vakhtang Wardosanidze Tbilisi State University, Georgia	Title: Emission characteristics of the side radiation of excited of the layer of alcohol solution of rhodamine 6G with the round geometric shape
Amina bentaleb University of Bejaia, Algeria	Title: Wast valorization as reinforcement for high impact polystyrene (hips) recycled from waste electric and electronic equipement
Salah A AL Kunooze University College, Iraq	Title: Influence of deposition time on Structure and optical properties of nanocrystalline cadmium Selenide (CdSe) thin films prepared by chemical bath deposition method

Poster presentation slots are still open!!