

5TH EDITION OF INTERNATIONAL CONFERENCE ON

MATERIALS SCIENCE AND ENGINEERING

CONFERENCE
PROGRAM

HYBRID EVENT

25-27
SEPT, 2023

VALENCIA
SPAIN

PUBLISHING PARTNER:



SPONSOR:



Alt text: American Elements, global manufacturer of high purity metal & ceramic nanopowders, semiconductor nanocrystals, & nanotechnology materials

Venue:

Olympia Hotel, Events & Spa
Carrer Mestre Serrano, 5, 46120 Alboraiia,
Valencia, Spain

DAY 01

Monday, Sept 25
(In-Person)

08:00-08:50
Registrations

08:50-09:00
Opening Ceremony
and Introduction

09:00-10:20
In-Person Keynote Presentations

10:20-16:00
In-Person Oral Presentations

16:20-17:20
In-Person Poster Presentations

DAY 02

Tuesday, Sept 26
(In-Person & Virtual)

08:30-09:00
AV check

09:00-09:40
In-Person Keynote Presentation

09:40-12:40
In-Person Oral Presentations

13:40-15:00
Virtual Keynote Presentations

15:00-18:20
Virtual Oral Presentations

18:20-19:10
Virtual Poster Presentations

DAY 03

Wednesday, Sept 27
(Virtual)

08:30-09:00
AV check

09:00-11:40
Virtual Keynote Presentations

11:40-19:00
Virtual Oral Presentations

 IN-PERSON
 VIRTUAL

Day 01 Break Timings

11:00-11:20 Coffee Break
13:00-14:00 Lunch Break
16:00-16:20 Coffee Break

Day 02 Break Timings

11:00-11:20 Coffee Break
12:40-13:40 Lunch Break
16:40-17:00 Coffee Break

Important Note

- The conference program will follow Central European Summer Time (CEST).
- Sometimes there may be small changes in the program due to technical problems or presenters not showing up. To avoid missing any presentations, all presenters are asked to be available for the entire day of their presentation.
- When the program refers to Local Timings, it means that the timing mentioned is based on the time zone of the presenter's country.

DAY 1

IN-PERSON

SEPTEMBER 25, 2023

Monday

KEYNOTE PRESENTATIONS

Central European Summer Time (CEST)

@HERA

08:00-08:50 | Registrations

08:50-09:00 | Opening Ceremony and Introduction

Moderator:

Alessandro Sergi, TWI Ltd, United Kingdom

09:00-09:40 In-Person

Zhongwei Guan

Advanced Materials Research
Centre of Technology Innovation
Institute, United Arab Emirates

Title: Mechanical behaviour of carbon fibre stitched composite joints and composite repair

09:40-10:20 In-Person

Paulo Cesar De Moraes

Catholic University of Brasilia,
Brazil

Title: Mathematical modeling the tumor heterogeneity using a nanoemulsion biodistribution

ORAL PRESENTATIONS

Chair:

Paulo Cesar De Moraes, Catholic University of Brasilia, Brazil

Zhongwei Guan, Advanced Materials Research Centre of Technology Innovation Institute, United Arab Emirates

10:20-10:40 In-Person

Eder Socrates Najar Lopes

University of Campinas, Brazil

Title: Processability of AISI-H13 hot work tool steel processed via additive manufacturing

10:40-11:00 In-Person

Dominika Beata Kwidzinska

Gdansk University of Technology,
Poland

Title: Effect of electrophoretic deposition of zirconium oxide on the Ti13Nb13Zr titanium

Group Photo

11:00-11:20 | Coffee Break

11:20-11:40 In-Person

Marianela Escobar Castillo

University of Duisburg-Essen,
Germany

Title: Laser ablation of nickel-and cobalt ferrite nanoparticles

11:40-12:00 In-Person

Lais Pellizzer Gabriel

State University of Campinas,
Brazil

Title: Additive manufacturing of customizable bioactive scaffolds for bone tissue engineering



Central European Summer Time (CEST)

12:00-12:20 In-Person

Jaume Camarasa
University of Lleida, Spain

Title: Plastic films to be used in a night-time radiative cooling technology: Optical and mechanical study for a RCE device

12:20-12:40 In-Person

Norbert Varga
University of Szeged, Hungary

Title: Synthesis optimization and release characterization of the drug-loaded poly(lactide-co-glycolide) colloidal particles

12:40-13:00 In-Person

Adam Juhasz
University of Szeged, Hungary

Title: Analysis of mixed micelle formation from binary surfactants for design of potential nanosized drug carriers

13:00-14:00 | Lunch Break

14:00-14:20 In-Person

Andreas K Huttel
University of Regensburg,
Germany

Title: High quality contacts to MoS₂ nanotube quantum dots

14:20-14:40 In-Person

Milind Bhandare
Mahatma Phule Mahavidyalaya,
India

Title: Interdependence of morphological electrical and magnetic properties of Cu-substituted Ni-Zn-Mg nano-crystalline ferrite

14:40-15:00 In-Person

Alessandro Sergi
TWI Ltd, United Kingdom

Title: Microstructure and properties evolution of additively manufactured alloy 718

15:00-15:20 In-Person

Alina Vladescu (Dragomir)
National Institute of Research
and Development for
Optoelectronics, Romania

Title: Effect of the N₂ and C₂H₂ mass flow rates on the corrosion properties of TiSiCN coatings

15:20-15:40 In-Person

Iuliia Bospalko
Federal Research Center
Boreskov Institute of Catalysis,
Russian Federation

Title: E-beam sintered materials for catalytic membranes with selective hydrogen permeability

15:40-16:00 In-Person

Jyi Tsong Lin
National Sun Yat-Sen University,
Taiwan

Title: Can a simple iTFET become a mainstream of future technology generation

16:00-16:20 | Coffee Break



(16:20-17:20) POSTER PRESENTATIONS



P1 In-Person

Graziella Kassick Saft
PIEP-Innovation in Polymer
Engineering, Portugal

Title: Advancing non-woven PPE materials: Heat-resistant stereocomplex PLA-rPET blend

P2 In-Person

Silvia Stifano
Curapath (Polypeptide
Therapeutic Solutions S.L.), Spain

Title: An alternative to Krystexxa: Polysarcosine bioconjugation to uricase, biodistribution, toxicology and pharmacokinetics.

P3 In-Person

Anasiei Ioana
National R&D Institute for
Nonferrous and Rare Metals,
Romania

Title: Development of a new material with enhanced properties for transportation industry application

P4 In-Person

Wilber Ortiz Lago
University of Puerto Rico Rio
Piedras, Puerto Rico

Title: Two-dimensional hexagonal boron nitride nanosheets decorated with silver nanoparticles for high-performance, self-powered, super-broad band UV-visible photodetectors

P5 In-Person

Tsisana Gavasheli
Ivane Javakhishvili Tbilisi state
University, Georgia

Title: Influence of an additional magnetic video-pulse on the nuclear spin echo of nuclei located in the domain walls of magnets

P6 In-Person

Simona Ravaszova
Brno University of Technology,
Czech Republic

Title: Effect of preparation of raw material mixture on purity of tricalcium aluminate through solid state synthesis

P7 In-Person

Andrey Rabin
Ben Gurion University of the
Negev, Israel

Title: Mechanical properties and microstructure of AISI D2 tool steel cryogenically treated using controllable cooling

P8 In-Person

Petra Lacikova
Brno University of Technology,
Czech Republic

Title: Durability aspects of filled wood cracks with different types of adhesives and sealants



Central European Summer Time (CEST)



P9 In-Person

Mei-Yi Liu
National Chin-Yi University of
Technology, Taiwan

Title: Electrorecovery of high purity Cu from the electrotonic wastewater

P10 In-Person

Ioana-Cristina Badea
National R&D Institute for
Nonferrous and Rare Metals,
Romania

Title: A reflection on the recovery process of primary components from Lithium-Ion batteries

P11 In-Person

Mona Mihailescu
Politehnica University Bucharest,
Romania

Title: Mesoporous silica nanoparticles detection and quantification in cultured cells using hyperspectral imaging

P12 In-Person

Mona Mihailescu
Politehnica University Bucharest,
Romania

Title: Nanometric structures on holographic labels imprinted via biodegradable polymers



End of Day 1

DAY 2

IN-PERSON & VIRTUAL

SEPTEMBER 26, 2023

Tuesday

KEYNOTE PRESENTATION

Central European Summer Time (CEST)

@HERA

08:30-09:00 CEST | AV check

Moderator:
Alina Vladescu (Dragomir),
National Institute of Research and Development for Optoelectronics, Romania

09:00-09:40 In-Person

Shuji Owada
Waseda University, Japan

Title: Development of next-generation process for effective utilization of low-grade aluminum dross to achieve carbon neutrality

ORAL PRESENTATIONS

09:40-10:00 In-Person

Toshihiko Yoshimura
Sanyo-Onoda City University,
Japan

Title: Material processing of magnesium alloy by energy-intensive multifunction cavitation in a strong magnetic field with laser light excitation

10:00-10:20 In-Person

Wojciech J Nowak
Rzeszow University of
Technology, Poland

Title: Effect of alloying elements content on mechanical properties and oxidation behavior in dry and wet atmosphere of NiCoCrAlFe-X high entropy alloys

10:20-10:40 In-Person

Mothibeli Pita
University of South Africa, South
Africa

Title: Study the microstructure, hardness and wear behaviour of aluminium 1050-H4 reinforced by corn cob particles.

10:40-11:00 In-Person

Mircea Teodor Nechita
Gheorghe Asachi Technical
University of Iasi, Romania

Title: Searching for the synergistic effect in AOPs, Case study: Sonophotocatalytic degradation of methylene blue by anatase nanopowder

11:00-11:20 | Coffee Break

11:20-11:40 In-Person

Chung Shin Jonathan Yuan
National Sun Yat-sen University,
Taiwan

Title: Recent progress for removal of Hg0 and/or NOx with graphene-based catalysts

11:40-12:00 In-Person

Izabell Craciunescu

National Institute for Research and Development of Isotopic and Molecular Technologies, Romania

Title: Functionalized magnetic composites with tailored size and shape and their applications

12:00-12:20 In-Person

Kamal Ahmed Mahmood

New Orientation Institute, Iraq

Title: Exploring the fundamental principles underlying bio and environmental science and practical applications of material science and engineering

12:20-12:40 In-Person

Rahul Saha

National Institute of Technology Hamirpur, India

Title: Comparison of chemical and nanofluid flooding enhanced oil recovery schemes for Assam oil reservoirs

12:40-13:40 | Lunch Break

KEYNOTE PRESENTATIONS

Moderator:

Sharda Sundaram Sanjay, An Autonomous PG College of University of Allahabad, India

13:40-14:20 17:10-17:50

Patil Devidas Ramrao

Rani Laxmibai Mahavidyalaya, India

Title: Highly selective ppm level lpg sensors based on $\text{SnO}_2\text{-ZnO}$ nanocomposites operable at low temperature

14:20-15:00 14:20-15:00

Leelakrishna Reddy

University of Johannesburg, South Africa

Title: The role of anions in rare-earth activated inorganic host materials for its luminescence characteristics

ORAL PRESENTATIONS

15:00-15:20 09:00-09:20

Erol Sancaktar

University of Akron, United States

Title: Design of electrically conductive adhesives and adhesive joints

15:20-15:40 14:20-14:40

Roger Rothern

Rothern Research Limited and the University of Chester, United Kingdom

Title: Utilisation of products from carbon capture processes



Central European Summer Time (CEST)

15:40-16:00 10:40-11:00

Taila Veloso de Oliveira
Federal University of Vicosa,
Brazil

Title: Biodegradable materials: The influence of additives added into the polymeric matrices

16:00-16:20 16:00-16:20

Robert Buenker
Princeton University, Germany

Title: The many flaws of the Lorentz transformation

16:20-16:40 18:20-18:40

Mohammed Al Bahri
A'Sharqiyah University, Oman

Title: An optimal configuration of vortex domain wall pinning in constricted magnetic nanowires for storage memory devices

16:40-17:00 20:10-20:30

Sharda Sundaram Sanjay
An Autonomous PG College of
University of Allahabad, India

Title: Surface functionalization of nanodiamonds

17:00-17:20 18:00-18:20

Delia Teresa Sponza
Dokuz Eylül University, Turkey

Title: Photocatalytic treatment of industrial pulp and paper mill wastewater using Fe₂O₃/TiO₂ nanocomposite

17:20-17:40 20:20-20:40

Mikhail Petrovich Kashchenko
Ural State Forest Engineering
University, Russia

Title: Nanoscale aspects of the dynamic theory of martensitic transformations

17:40-18:00 18:40-19:00

Ernst Titovets
Clinical Center of Neurology and
Neurosurgery, Belarus

Title: Computer modelling of water metabolism in the brain cortex using nanofluidic approach

18:00-18:20 21:30-21:50

Sivasubramanian Palanisamy
Kalasalingam Academy of
Research and Education, India

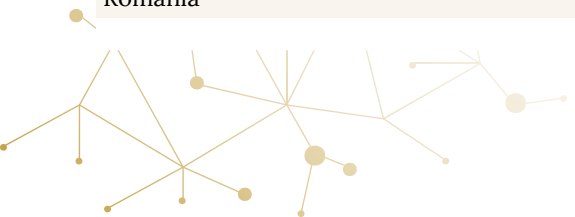
Title: Utilization of natural rubber with untreated acacia cassia powder particle reinforced composite materials

POSTER PRESENTATIONS

18:20-18:30 19:20-19:30

Irina Ungureanu (Negut)
National Institute for Lasers,
Plasma and Radiation Physics,
Romania

Title: Exploring MAPLE deposition of bioglass and statins for implant-like surfaces





Central European Summer Time (CEST)

18:30-18:40 18:30-18:40

Olga Guskova
IPF Dresden, Germany

Title: Azobenzene-organic semiconductor junctions: How the action of light on a photoresponsive anchored layer changes an ordered conjugated phase situated on top

18:40-18:50 23:40-23:50

Manankov Anatoli Vasilyevich
Tomsk State Universitet of
Architektуре and Building, Russia

Title: Structural mineralogy from the position of wave coherence

18:50-19:00 18:50-19:00

Christos P Beretas
Innovative Knowledge Institute,
France

Title: The effect of nanotechnology on human privacy

19:00-19:10 18:00-18:10

Aissat Sahraoui
Ibn Khaldoun University, Algeria

Title: Climatic ageing of low density polyethylene in agricultural greenhouses



End of Day 02

DAY 3

VIRTUAL

SEPTEMBER 27, 2023

Wednesday

KEYNOTE PRESENTATIONS

Central European
Summer Time
(CEST)

Local Timings

08:30-09:00 CEST | AV check

Moderator:

Taila Veloso de Oliveira, Federal University of Vicosa, Brazil

Chairs:

Zakaria Boumerzoug, University of Biskra, Algeria

Sergey Suchkov, Institute for Biotech & Global Health of RosBioTech and A.I. Evdokimov MGMSU, Russia

09:00-09:40

09:00-09:40

Sergey Suchkov

Institute for Biotech & Global Health of RosBioTech and A.I. Evdokimov MGMSU, Russia

Title: Personalized and Precision Medicine (PPM) as a unique healthcare model to be set up via biodesign, bio- and chemical engineering, translational applications, biomanufacturing and upgraded business modeling to secure the human healthcare and biosafety

09:40-10:20

08:40-09:20

Zakaria Boumerzoug

University of Biskra, Algeria

Title: Friction welding of dissimilar steels

10:20-11:00

11:20-12:00

Osman Adiguzel

Firat University, Turkey

Title: Crystallographic aspects of shape memory effect and reversibility in shape memory alloys

11:00-11:40

12:00-12:40

Yarub Al Douri

American University of Iraq, Iraq

Title: Structural and magnetic properties of new half metallic ferromagnetism

ORAL PRESENTATIONS

11:40-12:00

19:40-20:00

Anowar Hossain

RMIT University, Australia

Title: Camouflage textiles against advanced surveillance of defence in UV-Visible-IR spectrums for multidimensional combat backgrounds

12:00-12:20

18:00-18:20

Suwen Chen

Tongji University, China

Title: Characterization of filler morphology and dispersion of silicone adhesive by scanning electron microscopy

12:20-12:40

18:20-18:40

Shaoqing Wang

China university of Mining & Technology, China

Title: Coal graphitization and graphene derived from different coal ranks

12:40-13:00

13:40-14:00

Bakari Chaka

Maasai mara university, Kenya

Title: Synthesis and characterization of biochar adsorbents from sugarcane bagasse and cow dung

13:00-13:20

18:00-18:20

Vyacheslav Shulunov

Institute of Physical Materials Science of the Siberian Branch of the Russian Academy of Science, Russia

Title: Nanotechnologies and artificial neural networks for global rapid low-cost detection of any respiratory infections

13:20-13:40

19:20-19:40

Vladimir Chigrinov

Hong Kong University of Science and Technology, Hong Kong

Title: Nanosize azodye layers in new liquid crystal devices

13:40-14:00

17:10-17:30

Sivasubramanian Palanisamy

Kalasalngam Academy of Research and Education, India

Title: Evaluate the Mechanical, hardness and morphological characterization of Acacia Caesia Bark Fibers (ACBFs) reinforced composites

14:00-14:20

15:00-15:20

Evgeny Grigoryev

Merzhanov Institute of Structural Macrokinetics and Materials Science, Russia

Title: Advances of high-voltage consolidation of powder materials

14:20-14:40

17:50-17:10

Pooja Yadav

JNARDDC, India

Tite: Preparation of nano aluminium iso-propoxide by alkoxide method

14:40-15:00

15:40-16:00

Igor V Shevchenko

M.P. Semenenko Institute of Geochemistry, Ukraine

Title: Influence of the sun on water. Explanation of water memory mystery

15:00-15:20

18:30-18:50

N O Gopal

Vikrama Simhapuri University College, India

Title: Non-metal insertion into TiO_2 nanomaterials by various methods-A way to enhance the activity of TiO_2



15:20-15:40 18:50-19:10

Keerthiprasad K S
Vidya Vikas Institute of
Engineering & Technology, India

Title: Utilization of non-biodegradable industrial wastes in developing composite materials

15:40-16:00 16:40-17:00

Michael Tribelsky
Lomonosov Moscow State
University, Russia

Title: Nanoparticles as a tool to tailor electromagnetic field at subwavelength scales

16:00-16:20 15:00-15:20

Aroussy Youssef
Hassan II University, Morocco

Title: Optimizing the design and analyzing data for a solar photovoltaic-assisted reverse osmosis desalination plant: A sustainable solution for water scarcity

16:20-16:40 09:20-09:40

Edith Johanna Diaz Canas
Universidad Industrial de
Santander, Colombia

Title: Enhanced Removal of Methyl Orange from Aqueous Solutions by Sucrose-Based Reticulated Vitreous Carbon Modified with N-Doped TiO₂

16:40-17:00 17:40-18:00

Melnyk Igor
National Technical University of
Ukraine, Ukraine

Title: Advantages of using high voltage glow discharge electron guns in nanoelectronic production

17:00-17:20 16:00-16:20

Samuel Chisa Dike
Rivers State University, Nigeria

Title: Powering energy transition in Africa through nanotechnology

17:20-17:40 20:20-20:40

Uroosa Ejaz
Shaheed Zulfiqar Ali Bhutto
Institute of Science and
Technology, Pakistan

Title: Cellulose extraction from phragmites karka and its conversion into nano-fibers

17:40-18:00 19:10-19:30

Saman Momeni
Sharif University of Technology,
Iran

Title: Vibration suppression of laminated composite wind turbine blades reinforced with nanoparticles

18:00-18:20 17:00-17:20

Aissat Sahraoui
Ibn Khaldoun University, Algeria

Title: Improving grinding ball lifespan and efficiency through hardenability modelling and optimization



18:20-18:40

19:20-19:40

Ioannis A Dimos
University of Thessaly, Greece

Title: An innovative education 4.0 learning design framework to promote nanotechnology into the problem solving STEM approach within industry 4.0 era

18:40-19:00

17:40-18:00

Zakia Hammou
University of Science and
Technology of Oran, Algeria

Title: Effect of CNT volume fraction on the dynamic behavior of carbon nanotube reinforced FGM shells


****END NOTE****

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Notes





*We wish to meet you again at our
upcoming event...*

**6th Edition of International Conference on
Materials Science and Engineering**
March 18-20, 2024 | Singapore | Hybrid Event

Questions? Contact

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