

International Conference on  
**Advanced Materials for Sustainable Development  
(ICAMSD-2025)**

28-29 March, 2025

Malaviya National Institute of Technology (MNIT) Jaipur, India

ICAMSD  
2025



**IIM**  
Metallurgy  
Materials Engineering



Organised by

Department of Metallurgical & Materials Engineering, MNIT Jaipur  
in association with

The Indian Institute of Metals Jaipur Chapter & Asian Polymer Association

# INAUGURAL PROGRAM

9:00 - 9:05

**LAMP LIGHTING**

9:05 - 9:10

**WELCOME BY ORGANISING SECRETARY,  
DR. SWATI SHARMA**

9:10 - 9:15

**ADDRESS BY CONFERENCE CHAIR  
PROF. R. K. GOYAL**

9:15 - 9:20

**ADDRESS BY APA PRESIDENT  
PROF. BHUVANESH GUPTA**

9:20 - 9:30

**ADDRESS BY THE DIRECTOR & CHAIRMAN  
(I/c) BOG, MNIT JAIPUR, PROF. N. P. PADHY**

9:30 - 9:40

**THEME ADDRESS BY THE GUEST OF HONOR  
BRIG. ARUN GANGULI, SECRETARY GENERAL, IIM**

9:40 - 9:55

**INAUGURAL ADDRESS BY THE CHIEF GUEST  
DR. KOMAL KAPOOR, CHAIRMAN & CHIEF EXECUTIVE,  
NFC, DAE**

9:55 - 10:00

**RELEASE OF THE CONFERENCE SOUVENIR**

10:00 - 10:05

**PRESENTATION OF MEMENTOS**

10:05 - 10:20

**MOU CEREMONY BETWEEN  
MNIT JAIPUR AND NFC, DAE**

10:20 - 10:25

**VOTE OF THANKS BY SECRETARY  
DR. VIJAY N. NADAKUDURU**

10:25 - 10:30

**GROUP PHOTOGRAPH**



# International Conference on Advanced Materials for Sustainable Development (ICAMSD-2025)

28-29 March, 2025 | Malaviya National Institute of Technology (MNIT) Jaipur, India

## Day 1 (28<sup>th</sup> March 2025) Programme

Breakfast | Time: 08:15-09:00

**Inauguration | (Venue- APJ Abdul Kalam) Hall | Time: 09:00-10:30**

Inaugural Tea | Time: 10:30-11:00

### Session 1 (11:00-12:40) Venue- APJ Abdul Kalam Hall

#### Innovations in Materials Development

Moderator: Abhishek Tripathi

Chairs: M. K. Banerjee, SGVU, Jaipur & Prakash Bagga, SMS Metals Pvt. Ltd., Dewas

Time	Lecture	Title/Author
11:00-11:30	PL	<b>Challenges in special steel production in hot rolled products in India</b> <i>Ratnaprasad Atluri, Evonith Steels, Wardha</i>
11:30-12:00	PL	<b>Out of the box thinking towards sustainable corrosion protection</b> <i>Kallol Mondal, IIT Kanpur</i>
12:00-12:20	IL	<b>Recent developments in Stainless steel applications</b> <i>Chandra Prakash Agrawal, Synergy Steels Ltd., Alwar</i>
12:20-12:40	IL	<b>Expanding the Capabilities of X-ray Diffraction: Applications in Mineralogy and Advanced Materials</b> <i>Dr. Komal Jain, Anton Paar India Pvt. Ltd., Gurgaon</i>

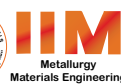
### Session 2 (11:00-12:50) Venue- S Radhakrishnan Hall

#### Innovations in Materials Development

Moderator: Dr. Kunal J. Borse

Chairs: Bhuvanesh Gupta, President APA & Dilip R. Peshwe, VNIT Nagpur

Time	Lecture	Title/Author
11:00-11:30	PL	<b>Nanoparticles in Hydrogels for Catalytic and Controlled Release Applications</b> <i>Badiger M V, CSIR- NCL Pune</i>
11:30-12:00	PL	<b>Intelligent Energy Generation and Storage: Game Changer Materials and Chemistry</b> <i>Kale B B, MIT World Peace University, Pune</i>
12:00-12:30	PL	<b>Smart Materials: The Challenges in the 21st Century</b> <i>Dibyendu Sekhar Bag, DMSRDE Kanpur</i>
12:30-12:50	IL	<b>Effect of Natural Sapindus Mukorossi Treatment Process on Bio-Waste Banana Fibers: An Alternative to Chemical Treatment Processes</b> <i>Sanjeev Kumar, PEC Chandigarh</i>



**Lunch Break | Time: 12:50-13:40**

**Poster Session (12:50-14:45)**

**Session 3 (14:45-16:45) Venue- APJ Abdul Kalam Hall**

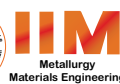
**Sustainable Materials**

*Moderator: Abhishek Tripathi*

*Chairs: Sushil Kumar Mishra, IIT Bombay & A. K. Bhargava, MNIT Jaipur*

Time	Lecture	Title/Author
14:45-15:05	IL	<b>Microstructure Development and Mechanical Property Assessment of Inconel 718 Fabricated by LPBF and WDED</b> <i>Sushil Kumar Mishra, IIT Bombay</i>
15:05-15:25	IL	<b>Development of Useful Aluminum Alloys with High-Iron (Fe) Impurity through Undiluted-Recycling</b> <i>Kameswari Prasada Rao Ayyagari, GITAM Visakhapatnam</i>
15:25-15:37	OL	<b>Study of rheology, durability and strength of self-compacting mortar with optimized fly ash dosage</b> <i>Anubala Jangra, M. D. University Rohtak</i>
15:37-15:49	OL	<b>Carbonation and Permeation properties of normal concrete, self-compacting concrete and mortar with the effective usage of Fly ash, Marble powder and Stone dust</b> <i>Md Marghoobul Haque, IIT Delhi</i>
15:49-16:01	OL	<b>Scalability and Cost-Effectiveness of Machine Learning in Solar Air Heater Applications</b> <i>Jailal Prabhakar Patel, MANIT BHOPAL</i>
16:01-16:13	OL	<b>Development of porous membranes of thermoplastic polyurethane/polyphenylsulfone blends for biomedical applications and water treatment</b> <i>Ajay Keloth, DIAT, Pune</i>
16:13-16:25	OL	<b>Advancing Sustainable Construction Materials through Investigation of Fly Ash Blended Cement Mortar Properties</b> <i>Soumyaranjan Panda, IIT Delhi</i>
16:25-16:37	OL	<b>Development of Eco-Friendly Carry Bags Using TPS-PBAT with Nanofillers via Blown Extrusion Techniques</b> <i>Chandramani Batsh, CSIR -ICT, Hyderabad</i>
16:37-16:49	OL	<b>A Comprehensive Review on methods for Predicting Shrinkage in Recycled Concrete Aggregate</b> <i>Moorvi, IIT Delhi</i>

**Tea | Time: 16:45-17:00**



**Session 4 (14:45-16:45) Venue- S Radhakrishnan Hall**

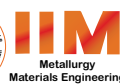
**Additive Manufacturing**

*Chairs: Animesh Mandal, IIT Bhubaneswar & Jinesh Kumar Jain, MNIT Jaipur*

*Moderator: Suresh Bandi*

Time	Lecture	Title/Author
14:45-15:05	IL	<b>3D printed polymer blends and composites with enhanced mechanical properties</b> <i>Kadhiravan Shanmuganathan, CSIR-NCL Pune</i>
15:05-15:25	IL	<b>3D printing of long chain branched polypropylene and structure-property analysis</b> <i>Harshawardhan Pol, CSIR-NCL Pune</i>
15:25-15:45	IL	<b>Real-Time Defect Detection and Process Control in Directed Energy Deposition via Plasma Plume Monitoring</b> <i>Ravi K R, IIT Jodhpur</i>
15:45-15:57	OL	<b>Machine Learning Perspective of Predictive Modelling for Additive Manufacturing</b> <i>Jasvinder Singh, PEC Chandigarh</i>
15:57-16:09	OL	<b>Upcycling of waste polypropylene into high-grade 3D printing filaments</b> <i>Animesh Gopal, CSIR-NCL Pune</i>
16:09-16:21	OL	<b>Influence of Heat Treatments on Mechanical Properties of LPBF Ti-6Al-4V/Ti-6Al-2Sn-4Zr-2Mo Bimetals</b> <i>Akhilesh Goyal, IIT Bombay</i>
16:21-16:33	OL	<b>Tensile and thermal Properties of 3D Printed High-Performance ULTEM 1010 / Short Carbon Fibers Composites</b> <i>Sushant Dattatray Sale, MNIT Jaipur</i>
16:33-16:45	OL	<b>Mechanical performance of 3D printed high-performance polymer</b> <i>Krishna Kumar, IIT Jodhpur</i>

**Tea | Time: 16:45-17:00**



## Session 5 (14:45-16:45) Venue- VLTC-001

### Advances in Steels

Moderator: Suresh Bandi

Chairs: Chandra Prakash Agrawal, Synergy Steels, Alwar & Tapan Desai, JLC Electromet, Jaipur

Time	Lecture	Title/Author
14:45-15:05	IL	<b>Refining of Induction Melted Steel, Enhancing Quality and Efficiency</b> <i>Prakash Bagga, SMS Metals Pvt. Ltd., Dewas</i>
15:05-15:25	IL	<b>Deformation-Induced Martensite: Hard or Tough?</b> <i>Avala Lavakumar, IIT Ropar</i>
15:25-15:45	IL	<b>Waste to Wealth: Engineering a Circular Economy through Ferrous Slag Transformation</b> <i>Prince Kumar Singh, IIT Ropar</i>
15:45-15:57	OL	<b>An investigation into the effects of tempering heat treatment on mechanical characteristics of tool steel</b> <i>Krishna Kumar, MNIT Jaipur</i>
15:57-16:09	OL	<b>Influence of intercritical temperature on cryogenic toughness of 7% Ni steel</b> <i>Gautam Mishra, IIT (BHU) Varanasi</i>
16:09-16:21	OL	<b>Optimization of micro-alloying and composition on the strength and toughness of 0.2%C-1.5Mn steel</b> <i>Prashant Kumar Singh, IIT (BHU) Varanasi</i>
16:21-16:33	OL	<b>Improvement of Stretch Flangeability of Boron Steel by Interrupted Loading</b> <i>Aman Mohhta, IIT Madras</i>
16:33-16:45	OL	<b>Bake-hardening (BH) response of DP590 and FB590 hot-rolled steels subjected to various pre-strain levels and baking conditions</b> <i>Saish Gulab Kumbhar, COEP Technological University Pune</i>

Tea | Time: 16:45-17:00

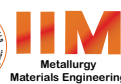
## Session 6 (17:00-18:00) Venue- APJ Abdul Kalam Hall

### Functional Materials

Moderator: Abhishek Tripathi

Chairs: Badiger MV, CSIR- NCL Pune & Mrityunjay Doddamani, IIT Jodhpur

Time	Lecture	Title/Author
17:00-17:20	IL	<b>Nanofiller-incorporated reticulated vitreous carbon foam for multifunctional applications</b> <i>T Umasankar Patro, DIAT Pune</i>
17:20-17:32	OL	<b>Designing of Nano-heterostructures for Enhanced Photocatalytic Hydrogen Generation</b> <i>Sudhir S. Arbuj, CMET Pune</i>
17:32-17:44	OL	<b>Designing Bioreceptive Polypropylene for Use in Biomedical Applications</b> <i>Chetna Verma, IIT Delhi</i>
17:44-17:56	OL	<b>Self-healing and Shape-memory Behaviour of Poly (Ethylene-co-Methacrylic Acid)/ Thermoplastic Polyurethane Blend Materials</b> <i>Shilpi Tiwari, DMSRDE, Kanpur</i>
17:56-18:08	OL	<b>Plasmonic Coupling Effect of Annealed Gold Nanoarrays</b> <i>Gaurav Pal Singh, PEC Chandigarh</i>



**Session 7 (17:00-18:00) Venue- S Radhakrishnan Hall**

**Energy Materials**

*Moderator: Kunal J. Borse*

*Chairs: Kale B B, MIT World Peace University, Pune & Vivekananda, MNIT Jaipur*

Time	Lecture	Title/Author
17:00-17:20	IL	<b>Advanced Chemistry Cell (ACC) Research: Progress at C-MET and Future Plans</b> <i>Milind V Kulkarni, C-MET, Pune</i>
17:20-17:32	OL	<b>Thermal decomposition behaviour of ammonium perchlorate/LaMn<sub>0.4</sub>Fe<sub>0.6</sub>O<sub>3</sub> composition: an artificial neural networking investigation</b> <i>Pragnesh Dave, Sardar Patel University Anand Gujarat</i>
17:32-17:44	OL	<b>Effect of Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> Addition on Electrical Behaviour of NMC-811 Cathodes for Li-Ion Batteries</b> <i>Kaustubh Ramesh Kambale, PEC Chandigarh</i>
17:44-17:56	OL	<b>Electrochemical study of transition metal substituted strontium titanate</b> <i>Tithi Sen, DMSRDE, Kanpur</i>

**Session 8 (17:0-18:00) Venue- VLTC-001**

**Polymeric and Bioengineered Materials**

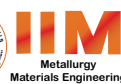
*Moderator: Suresh Bandi*

*Chairs: Susheel Kalia, IMA Dehradun & Kadiravan Shanmuganathan, CSIR-NCL Pune*

Time	Lecture	Title/Author
17:00-17:20	IL	<b>Hemostatic Cryogels and Hydrogels for Faster Clotting</b> <i>Vivek Verma, IIT Kanpur</i>
17:20-17:40	IL	<b>High Performance Organic Fibers for Defence Applications</b> <i>Swati Chopra, DMSRDE, Kanpur</i>
17:40-17:52	OL	<b>Development of Smart Biodegradable Mulch Film for Sustainable Agriculture</b> <i>Atiqul Islam, CSIR - ICT, Hyderabad</i>
17:52-18:04	OL	<b>Ultrasound assisted synthesis of ZnO-PEG-chitosan nanobiocide film using Origanum majorana flower extract</b> <i>Garima Ameta, MSU, Udaipur</i>
18:04-18:16	OL	<b>LiH-Polymer Composite Shield for Enhanced Radiation Protection in Space Applications</b> <i>Kavita Lalwani, MNIT Jaipur</i>

**Departure from conference venue at 18:30**

**Gala Dinner | Venue: Hari Van Resort (Garden) | Time: 19.00-22:00**



Session 9 (17:00-18:00) Venue- VLTC-101

**Sustainable Materials**

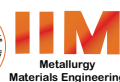
*Moderator: Deepankar Panda*

*Chairs: Kameswari Prasada Rao Ayyagari, GITAM Visakhapatnam & Upender Pandel, MNIT Jaipur*

Time	Lecture	Title/Author
17:00-17:20	IL	<b>A review on Aluminium-rare earth based alloys</b> <i>Animesh Mandal, IIT Bhubaneswar</i>
17:20-17:32	OL	<b>Review of the Correlation between the Microstructure, Arc Modes, and Corrosion Behaviour of SS316L during Wire Arc Additive Manufacturing (WAAM)</b> <i>Naveen Porwal, MNIT Jaipur</i>
17:32-17:44	OL	<b>Fabrication of Low-Temperature Co-Fired Ceramic (LTCC) Ring Resonators by Digital Light Processing (DLP) based 3D printing Technology</b> <i>Lalita Bari, C-MET Pune</i>
17:44-17:56	OL	<b>3D-Printed Polycarbonate Composites Reinforced with Short Carbon Fibers</b> <i>Tejas Dilip Rajput, CSIR NCL Pune</i>
17:56-18:08	OL	<b>Effect of process parameters and heat-treatment on structure and mechanical properties of directed energy deposited near alphaTi6242 alloy</b> <i>Sita Choudhary, IISc Bengaluru</i>

**Departure from conference venue at 18:30**

**Gala Dinner | Venue: Hari Van Resort (Garden) | Time: 19.00-22:00**



## Day 2 (29<sup>th</sup> March 2025) Programme

Breakfast | Time: 08:15-09:00

### Session 10 (09:00-10:40) APJ Abdul Kalam Hall

#### Innovations in Materials Development

Moderator: Abhishek Tripathi

Chairs: Kallol Mondal, IIT Kanpur, Kanpur & V C Srivastava, CSIR-NML Jamshedpur

Time	Lecture	Title/Author
09:00-09:30	PL	<b>Machine Learning Enhanced Imaging and Materials Characterization Methods</b> <i>Nikhil Gupta, New York University USA</i>
09:30-10:00	PL	<b>Plasma Sprayed Ceramic Membrane for Water Filtration</b> <i>Anup Kumar Keshri, IIT Patna</i>
10:00-10:20	IL	<b>Role of Advanced Packaging in the Semiconductor Industry</b> <i>Deepak Goyal, Intel Corp</i>
10:20-10:40	IL	<b>Development of cost-effective and eco-friendly inhibitor to mitigate the corrosion due to ethanol blended petrol</b> <i>Deepak Dwivedi, RGIPT, Amethi</i>

### Session 11 (09:00-10:40) Venue- S. Radhakrishnan Hall

#### Sustainable Materials

Moderator: Suresh Bandi

Chairs: Dibyendu Sekhar Bag, DMSRDE, Kanpur and Kamendra Awasthi, MNIT Jaipur

Time	Lecture	Title/Author
09:00-09:30	PL	<b>Resource efficiency &amp; circular economy through e-waste recycling</b> <i>R. Ratheesh, C-MET Hyderabad</i>
09:30-10:00	PL	<b>Advanced Next Generation Biocomposites for Designing Implant Materials</b> <i>Kantesh Balani, IIT Kanpur</i>
10:00-10:20	IL	<b>Development of New High temperature Ti alloys with improved properties</b> <i>Jayaprakash Murugesan, IIT Indore</i>
10:20-10:40	IL	<b>Advancing from Single Crystal to Polycrystalline Technologies for synthesis of Transparent Ceramics: A Roadmap for Future</b> <i>Jagmohan Datt Sharma, PEC Chandigarh</i>

Tea | Time: 10:40-11:00





**Session 12 (11:00-13:00) Venue- APJ Abdul Kalam Hall**

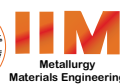
**High Temperature Materials and Characterizations**

*Moderator: Abhishek Tripathi*

*Chairs: Nikhil Gupta, New York University & Ravi K R, IIT Jodhpur*

Time	Lecture	Title/Author
11:00-11:20	IL	<b>Crystallization Kinetics of Zr-Co-Al Metallic Glass</b> <i>Jatin Bhatt, VNIT Nagpur</i>
11:20-11:40	IL	<b>Microstructure and texture development in UNS S32101 lean duplex stainless steel</b> <i>Rajesh Khatirkar, VNIT Nagpur</i>
11:40-12:00	IL	<b>High strain-rate plastic flow behavior of Ni base superalloys through indentation experiments</b> <i>Kumaraswamy Adepu, DIAT Pune</i>
12:00-12:12	OL	<b>Microstructural Characterization and Phase Transformation Behaviour of Zr-1Nb Alloy during Thermo-Mechanical Processing</b> <i>Swarup Acharya, NFC, Hyderabad</i>
12:12-12:24	OL	<b>Micro Electro Discharge Drilling Machine: Precision Machining for Micro-Scale Applications</b> <i>Saurabh Jain, MANIT Bhopal</i>
12:24-12:36	OL	<b>Oxidation Fatigue Interaction Behaviour of CM247 DS LC alloy</b> <i>Sharat Chandra, MNIT Jaipur</i>
12:36-12:48	OL	<b>Comprehensive Exploration of Zinc Oxide Nanoparticles: Unraveling the Intricate Intermolecular Properties through Advanced Characterization Techniques</b> <i>Brajesh Kumar Ahirwar, MANIT Bhopal</i>
12:48-13:00	OL	<b>High temperature oxidation behaviour of powder forged IN718 oxide dispersion strengthened (ODS) superalloy</b> <i>Suyog Digambar Gaikwad, IIT Roorkee</i>

**Lunch Break Time: 13:00-14:00**



**Session 13 (11:00-13:00) Venue- S Radhakrishnan Hall**

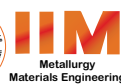
**Advanced Composites**

*Moderator: Kunal J. Borse*

*Chairs: R K Goyal, MNIT Jaipur & Sanjeev Kumar, PEC Chandigarh*

Time	Lecture	Title/Author
11:00-11:20	IL	<b>Space &amp; Aerospace Materilas: Present Trends &amp; Future Prospectives</b> <i>Ravi Kumar Varma, ISRO, Ahemdabad</i>
11:20-11:32	OL	<b>Strength and Fracture Analysis of Electroless Coated SiC Reinforced Hybrid GFRP</b> <i>Sarbjit Singh, PEC Chandigarh</i>
11:32-11:44	OL	<b>Synergistic Photocatalytic Degradation of Textile Dye using Novel Polypyrrole-Zinc Oxide Nano composite System</b> <i>Nandini Venkat Iyer, COEP Technological University Pune</i>
11:44-11:56	OL	<b>Microstructural and mechanical behaviour of thermally aged Al6082/TiO<sub>2</sub>/SiC bimodal composite</b> <i>Subodh Kumar, MANIT Bhopal</i>
11:56-12:08	OL	<b>Tribological analysis of T6 heat-treated Al7075 composites reinforced with ceramic and sustainable particles</b> <i>Bhagwan Singh Lovevanshi, MANIT Bhopal</i>
12:08-12:20	OL	<b>Impact and Post-Impact Damage Assessment of Hybrid Basalt Fiber Composites Reinforced with Flax, Hemp, and Glass Fibers via Hand Layup</b> <i>Adarsh Chaurasiya, MANIT Bhopal</i>
12:20-12:32	OL	<b>Influence of Dispersion Routes on the Multifunctional Properties of LLDPE/CNF Nanocomposites</b> <i>Vaibhav Jain, IIT Delhi</i>
12:32-12:44	OL	<b>Electrical Properties of Uncoated Ni and Carbon Coated Ni Nanoparticles Reinforced Poly(ether-ketone) Nanocomposites</b> <i>Roshan D Gadve, MNIT Jaipur</i>
12:44-12:56	OL	<b>Tailoring electrical and thermal properties of poly(ether-ketone) using Bamboo like-Carbon nanotubes: Prospects for EMI shielding</b> <i>Mohini Tiwari, IIT Roorkee</i>
12:56-1:08	OL	<b>Fabrication and characterization of in-situ A356-TiB<sub>2</sub> composites disc through intensive high shear mixing and centrifugal casting process</b> <i>Sunil Manani, PEC Chandigarh</i>

**Lunch Break Time: 13:00-14:00**



**Session 14 (11:00-13:00) Venue- VLTC-001**

**Light Metals and Alloys**

**Moderator: Suresh Bandi**

**Chairs: Kantesh Balani, IIT Kanpur, Kanpur & Swati Sharma, MNIT Jaipur**

Time	Lecture	Title/Author
11:00-11:20	IL	<b>Synthesis of Ti-Al Intermetallic by MASHS Technique and Study its MW Absorption Properties in Ceramic Matrix</b> <i>Yojana Janu, DL Jodhpur</i>
11:20-11:40	IL	<b>Effect of Tensile Twinning on Microstructure and Texture Evolution in AZX311 Mg Alloy under Cyclic Shear Deformation</b> <i>Jaiveer Singh, IIT Jodhpur</i>
11:40-11:52	OL	<b>Micro-alloying and grain refinement of Mg-alloy using friction stir processing</b> <i>Kamal Kumar, PEC Chandigarh</i>
11:52-12:04	OL	<b>Effect of Incident Velocity on damage of layered targets in Ballistic Applications</b> <i>Bhonsle Chetankumar, DIAT Pune</i>
12:04-12:16	OL	<b>Effect of Fragments shapes and materials on damage of layered Targets in Ballistic Applications</b> <i>Kirit Prasad Gogineni, DIAT Pune</i>
12:16-12:28	OL	<b>Effect of Angle of Obliquity on damage of layered Targets with varying thickness in Ballistic Applications</b> <i>Saleha Haque, DIAT Pune</i>
12:28-12:40	OL	<b>Comparison of Uniaxial and Torsional Low Cycle Fatigue Behavior of a Cu-Ni Alloy</b> <i>Adarsh Bharti, IIT Jodhpur</i>
12:40-12:52	OL	<b>Development and characterization of functionally graded A6061-TiB2 composites using high shear mixing and centrifugal casting technique</b> <i>Nidhi Sindhu, MNIT Jaipur</i>

**Lunch Break Time: 13:00-14:00**



**Session 15 (11:00:13:00) Venue- VLTC-101**

**Advanced Composites**

*Moderator: Deepankar Panda*

*Chairs: Amar Patnaik, MNIT Jaipur & Sreekumar V. Madam, MNIT Jaipur*

Time	Lecture	Title/Author
11:00-11:20	IL	<b>Materials for Critical Technology and Human Space Missions</b> <i>Prateek Bansal, ISRO, Ahmedabad</i>
11:20-11:32	OL	<b>Strain Rate Sensitivity and Energy Absorption Characteristics of PU Foam under Effective Loading</b> <i>Vedant Utikar, DIAT, Pune</i>
11:32-11:44	OL	<b>Poly(ether-ketone) nanocomposites with functionalized MWCNTs for EMI shielding</b> <i>Roshan D Gadve, MNIT Jaipur</i>
11:44-11:56	OL	<b>Adhesives and their Various Applications</b> <i>Meenakshi Pal, University of Rajasthan, Jaipur</i>
11:56-12:08	OL	<b>Study on Poly(ether-ketone)/Silica Nanocomposites for Electronic Applications</b> <i>Mandar J Joshi, Dr S and S S Gandhi College of Engineering and Technology, Surat</i>
12:08-12:20	OL	<b>Effect of fragment mass on damage of hybrid targets in Ballistic Applications</b> <i>Rishabh Subhash Almel, DIAT Pune</i>
12:20-12:32	OL	<b>PEEK Composites: A Promising Structural Material for Space Radiation Protection</b> <i>Sreedevi V V, MNIT Jaipur</i>
12:32-12:44	OL	<b>Direct Energy Deposition-Based Composite Fabrication</b> <i>Mohit Sharma, IIT Roorkee</i>
12:44-12:56	OL	<b>Corrosion Resistance and wear analysis of AA7050 through TiO<sub>2</sub>/BN Reinforcements</b> <i>Anil Chourasiya, MANIT Bhopal</i>
12:56-13:08	OL	<b>Analysis of corrosion behaviour and electrical conductivity of AA7075/HEAp composite</b> <i>Pradip Kumar Verma, MANIT Bhopal</i>

**Lunch Break Time: 13:00-14:00**



**Session 16 (14:00-16:00) Venue- APJ Abdul Kalam Hall**

**Corrosion and Coatings**

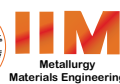
*Moderator: Abhishek Tripathi*

*Chairs: Jagmohan Datt Sharma, PEC, Chandigarh & Randhir Kumar Singh, MNIT Jaipur*

Time	Lecture	Title/Author
14:00-14:20	IL	<b>Corrosion and Slow Strain Rate Tests of a micro-alloyed Steel and with nano-crystalline Ni-coating by Pulse Plating and Ti-6Al-4V Alloy under Applied Potentials</b> <i>Karuna Sindhu Ghosh, NIT Durgapur</i>
14:20-14:32	OL	<b>Influence of Silicon Addition on the Microstructure, Hardness and Corrosion performance of Al-6.5Mg Alloys</b> <i>Kyada Tushal Kalubhai, Dr S and S S Gandhi College of Engineering and Technology</i>
14:32-14:44	OL	<b>Examination of the corrosion inhibition properties of plant extract on the corrosion of DSS2205 in an acidic environment</b> <i>Swati Chaudhary, RGIPT, Amethi</i>
14:44-14:56	OL	<b>Development of inhouse inhibitor for the application in reduction of corrosion in storage of ethanol blended petrol</b> <i>Saurabh Kumar, RGIPT, Amethi</i>
14:56-15:08	OL	<b>Blister resistive and corrosion resistive additives for zinc primer</b> <i>Siddharth Atal, RGIPT, Amethi</i>
15:08-15:20	OL	<b>Synergistic effect of Al<sub>2</sub>O<sub>3</sub> and MoS<sub>2</sub> on the corrosion behaviour of plasma sprayed aluminium matrix composite coating</b> <i>Saurav Keshri, IIT Patna</i>
15:20-15:32	OL	<b>Influence of Novel Thermomechanical Processing on Microstructure, Mechanical Properties, and Tribological Behaviour of Ti-6Al-4V Alloy</b> <i>Sandeep Mahore, MNIT Jaipur</i>
15:32-15:44	OL	<b>Impact of particle velocity on HVOF coating properties: A state-of -the -art review</b> <i>Atirek Gaur, MNIT Jaipur</i>
15:44-15:56	OL	<b>Corrosion Behaviour of Al<sub>x</sub>(CoCrFeNi) high entropy alloys in 3.5% NaCl Aqueous Solution</b> <i>Vaibhav Kathavate, MIT World Peace University Pune</i>

**Tea | Time: 16:00-16:15**

**Valedictory Function | Time: 16:15-17:15**



Session 17 (14:00-16:00) Venue- S Radhakrishnan Hall		
High Entropy Alloys and Powder Metallurgy		
Moderator: Kunal J. Borse		
Chairs: Jatin Bhatt, VNIT Nagpur & Vijay N N, MNIT Jaipur		
Time	Lecture	Title/Author
14:00-14:20	IL	<b>Iron (Fe) rich medium entropy alloy: Microstructural evolution and mechanical properties</b> <i>Vikas Chandra Srivastava, CSIR-NML Jamshedpur</i>
14:20-14:32	OL	<b>Study the effect of different annealing conditions on phase and microstructure evolution of CoCrFeNi-Ti high entropy alloy synthesized through mechanical alloying</b> <i>Apoorva Vashishtha, MNIT Jaipur</i>
14:32-14:44	OL	<b>Evaluation of Microstructural and Mechanical Properties of Microwave Sintered FeNiCoCr High-Entropy Alloy reinforced with SiC Particles</b> <i>Radha Raman Mishra, BITS Pilani</i>
14:44-14:56	OL	<b>Monte-Carlo simulation-based study of the annealing twinning of high entropy alloys and its influence on microstructure and texture evolution</b> <i>Lalit Kaushik IIT Jodhpur</i>
14:56-15:08	OL	<b>Correlating Structural and Mechanical Properties of (MoNbTaW)N films as a Function of Deposition Temperature</b> <i>Venkata Girish Kotnur, University of Hyderabad</i>
15:08-15:20	OL	<b>Development of CoCrFeNiSi0.5 Multi Component Alloy surface coating on plain carbon steel through a novel in-situ weld surface alloying approach</b> <i>Veera Sreenu Addepalli, Rajiv Gandhi University of Knowledge Technologies Nuzvid</i>
15:20-15:32	OL	<b>Effect of Al on microstructure and Phase evolution of CoCrMnNiFeAl<sub>x</sub> high entropy alloy processed via mechanical alloying</b> <i>Uday Pratap Singh Bais, MANIT Bhopal</i>
15:32-15:44	OL	<b>Structure-Property Co-relation with Hydride Orientation in Zircaloy-4 Seamless Clad and Zirconium Lined Zircaloy-4 Duplex Clad for Water Cooled Reactors</b> <i>Swarup Acharya, NFC, Hyderabad</i>

Tea | Time: 16:00-16:15

Valedictory Function | Time: 16:15-17:15



**Session 18 (14:00-16:00) Venue- VLTC-001**

**Waste to Wealth**

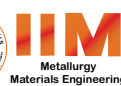
*Moderator: Suresh Bandi*

*Chairs: Kameswari Prasada Rao Ayyagari, GITAM University, Vishakhapattanam & Yojana Janu, DL Jodhpur*

Time	Lecture	Title/Author
14:00-14:12	OL	<b>Synthesis of strategic NdF<sub>3</sub>/PrF<sub>3</sub> mixed-fluorides from indigenous sources for strategic applications</b> <i>Sai Anuraag Namuduri, C-MET, Hyderabad</i>
14:12-14:24	OL	<b>Transforming Waste to Value: Sewage Sludge Biochar for Sustainable Dye Removal</b> <i>Bhavana Shanmughan, DIAT, Pune</i>
14:24-14:36	OL	<b>Sustainable Recovery of Valuable Metals from Jarosite Residue Using a Sulfationâ€œRoastingâ€œLeaching Process</b> <i>Manorama Swain, The Maharaja Sayajirao University of Baroda, Vadodara</i>
14:36-14:48	OL	<b>Sustainable Strategies for Recycling and Recovery of Electrical Industrial Waste</b> <i>Ankit Bhojani, The Maharaja Sayajirao University of Baroda, Vadodara</i>
14:48-15:00	OL	<b>Stability behaviour and thermophysical characteristics of nano-particles integrated to improve the performance of refrigeration systems- A review</b> <i>Md Jamil Akhtar, MANIT Bhopal</i>
15:00-15:12	OL	<b>Rice husk ash filled glass epoxy hybrids: A sustainable microwave absorbing material</b> <i>Vaibhav Sanjay Darekar, MNIT Jaipur</i>
15:12-15:24	OL	<b>Applications of Nanomaterials for Soft Robotics: A Review</b> <i>Sandeep Mahore, MNIT Jaipur</i>
15:24-15:36	OL	<b>Tribological Investigation of Fiber Orientation Effect on the Wear Performance of Bamboo Fiber and Recycled Glass Fiber Epoxy Hybrid Composite</b> <i>Deepa Ahirwar, MANIT Bhopal</i>

**Tea | Time: 16:00-16:15**

**Valedictory Function | Time: 16:15-17:15**



Session 19 (14:00-16:00) Venue- VLTC-101		
Innovations in Materials Development		
Moderator: Deepankar Panda		
Chairs: Rajesh Khatirkar, VNIT Nagpur & Anup Kumar Keshri, IIT Patna		
Time	Lecture	Title/Author
14:00-14:20	IL	<b>3D Printing - Challenges and Opportunities</b> <i>Mrityunjay Doddamani, IIT Jodhpur</i>
14:20-14:32	OL	<b>Development of Aluminium Alloy Anode Material and a Prototype Aluminium-Air Battery</b> <i>Utkarsh Bhadauria, VNIT Nagpur</i>
14:32-14:44	OL	<b>Synthesis of NiO/g-C<sub>3</sub>N<sub>4</sub> Based Nano-Heterostructures: An Efficient Photocatalytic System for Hydrogen Generation</b> <i>Amol Gulabrao Kadlag, S.N. Arts, D.J.M. Commerce and B.N.S. Science College (Autonomous), Sangamner</i>
14:44-14:56	OL	<b>Can PVP-Tuned ZIF-67 Derivatives Enhance Hydrogen Production in Seawater Splitting?</b> <i>Manisha Jain, CSIR-NCL Pune</i>
14:56-15:08	OL	<b>An Ultra-Fast and Facile Fabrication of Turbostratic Holey Graphene and its Electrochemical Behaviour</b> <i>Niranjana Pandit, IIT Patna</i>
15:08-15:20	OL	<b>Innovative Design Strategies for PP Mesh Surfaces in Infection-Resistant Healthcare System</b> <i>Vipula Sethi, IIT Delhi</i>
15:20-15:32	OL	<b>N-Acryloyl phenylalanine and their anti-inflammatory potential on Lipopolysaccharide-induced raw 264.7 macrophages; Systemic inflammation on a rat model</b> <i>Divya Pareek, IIT(BHU) Varanasi</i>
15:32-15:44	OL	<b>Synthesis, characterisation, and comparative assessment of general-purpose flexible polyurethane foam versus medical-grade polyurethane foam</b> <i>Jay Hind Rajput, IIT Ropar</i>

Tea | Time: 16:00-16:15

Valedictory Function | Time: 16:15-17:15