



**17th International Conference on Materials
Processing and Characterization (17 ICMPC 2025)**
...towards Sustainability in Material Characterization
27-29 Nov 2025



Curtin University
Malaysia

Conference Venue: Imperial Hotel Miri



Hosted by: Curtin University, Malaysia



Message from the Pro Vice-Chancellor, President and Chief Executive Curtin University Malaysia



**Professor Vincent Lee
Chieng Chen**

Pro Vice-Chancellor, President
and Chief Executive
Curtin University Malaysia

It is with great pleasure that I extend a warm welcome to all delegates, distinguished speakers, and guests attending the **17th International Conference on Materials, Processing and Characterization (ICMPC 2025)**, hosted by **Curtin University Malaysia**.

We are deeply honoured to host this esteemed international conference for the first time in Malaysia, and notably, for the first time in Asia beyond India. This milestone reflects not only the growing global significance of ICMPC but also Curtin Malaysia's strengthening role as a leading hub for research, innovation, and international

collaboration in the Asia-Pacific region. The conference theme, *'Towards Sustainability in Materials and Characterization'*, resonates strongly with Curtin University's institutional vision - to work in partnerships to make a real difference for people and our planet. At Curtin Malaysia, we are committed to advancing **strategic research priorities** that address the world's most pressing challenges, including **sustainability, advanced manufacturing, digital transformation, and energy transition**. These areas represent Curtin's global strengths and serve as vital platforms for interdisciplinary collaboration and innovation.

ICMPC 2025 provides a timely and important forum for scholars, researchers, and industry professionals from around the world to engage in meaningful dialogue, exchange knowledge, and forge partnerships that will shape the future of materials science and engineering. It is through such collaboration that we can accelerate progress toward sustainable and responsible technological advancement. I would like to commend **Professor Sujan Debnath** and the Organising Committee for their outstanding efforts in bringing this conference to fruition, and to express sincere appreciation to our co-host, the **Gokaraju Rangaraju Institute of Engineering and Technology (GRIET)**, for their long-standing partnership. Our gratitude also extends to **Business Events Sarawak**, our partners, and sponsors for their invaluable support in ensuring the success of this event.

May **ICMPC 2025** be a rewarding experience for all participants, and may the insights and collaborations emerging from this conference continue to advance research excellence, innovation, and sustainability in our global community. On behalf of **Curtin University Malaysia**, I wish you a most productive and memorable conference.

Message from the Vice-President GRES



Sri GVK Ranga Raju

Vice-President

Gokaraju Rangaraju Educational
Society

It is a privilege to welcome the 17th International Conference on Materials Processing and Characterization (ICMPC-2025), in recognition of the dedicated efforts of a team from GRIET's whose work continually advances our understanding of the connection between scientific attitude and collaboration. This conference serves as a powerful reminder that scholars flourish through curiosity, collaboration, and the vibrant exchange of ideas across diverse cultures and disciplines. Hosting the conference in Malaysia is a feather in the institute's cap, demonstrating a more

appealing display of international team spirit. It is hoped that the discussions initiated here will facilitate enduring interpersonal connections, generate novel insights, and open new avenues for research. I am grateful to be part of a community that advances scientific understanding not only of research but also of the significant role scientific research plays in society.

As an institution committed to scientific progress, we recognize that groundbreaking advancements often result from collaborative efforts. This conference aims to promote interdisciplinary partnerships and foster a culture of open, constructive knowledge exchange. The insights generated here are poised to address complex practical challenges and catalyze future innovations.

As we look to the future, our institute is excited to reveal bold plans to elevate its research excellence. We are dedicated to expanding cutting-edge laboratories, increasing funding opportunities, and forging new industry and global collaborations. Our ongoing support for faculty and student researchers includes mentorship, research grants, and international platforms to showcase their groundbreaking work. Furthermore, we are set to launch specialized research centers in pioneering fields such as artificial intelligence, sustainable technologies, advanced material sciences, reinforcing our commitment to innovation and impactful discovery.

I am pleased to reaffirm our dedication to developing and reinforcing global partnerships. We will continue to assist faculty and students in connecting with international networks, participating in global forums, and undertaking impactful cross-border research. Alongside our international collaborations, we aim to broaden knowledge and help build a more innovative and brighter future for all.

Wishing all participants a meaningful, inspiring, and memorable ICMPC.

Message from the Conference Chair



**Professor Sujan
Debnath**
Conference Chair, ICMPC

On behalf of the Organising Committee, it is my great pleasure to welcome you to the 17th International Conference on Materials Processing and Characterization (ICMPC 2025), hosted by Curtin University Malaysia in the vibrant city of Miri, Sarawak, and co-hosted by the Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, India. This year's conference marks a historic milestone, as ICMPC is being held in Asia beyond India for the first time, under the theme '*Towards Sustainability in Materials and Characterization.*'

Since its inception in 2011 at GRIET, ICMPC has evolved into a respected international platform, previously hosted by renowned institutions such as Victoria University (Australia), Northumbria University (United Kingdom), and IIT Indore (India). Over the years, it has become a leading forum for advancing research, showcasing innovation, and fostering collaboration in materials science and engineering. ICMPC 2025 welcomes over 200 distinguished researchers, scientists, and industry professionals representing Australia, India, Poland, South Africa, Brunei, Iraq, Bangladesh, Timor-Leste, Malaysia, and other countries. This diversity of participation underscores the growing global commitment to advancing sustainable materials innovation and responsible technological progress.

Over the next three days, participants will engage in keynote sessions, technical presentations, and collaborative networking opportunities that bridge academia, industry, and policy, creating a vibrant environment for interdisciplinary dialogue and knowledge exchange. We express our sincere appreciation to Curtin University Malaysia for hosting this landmark event, to GRIET for their long-standing collaboration, and to Business Events Sarawak for their generous support and recognition of ICMPC 2025 as a conference of legacy impact.

Our heartfelt thanks also go to our partners and sponsors - Sarawak Digital Economy Corporation, University Brunei Darussalam, University Teknologi Brunei, and Press Metal Bintulu - for their invaluable contributions, as well as to Rustic Event Management and Imperial Hotel Miri for their excellent logistical support. I wish all participants an engaging, insightful, and memorable conference experience. May ICMPC 2025 serve as a catalyst for innovation, collaboration, and sustainability in materials science and beyond.

Message from the Conference Chair



Professor Swadesh Kumar Singh
Co-Chair ICMPC

It is with great pride and pleasure that we now begin our journey into the 17th International Conference on Materials Processing and Characterization (ICMPC 2025), hosted in Malaysia, a nation known for its vibrant culture. Holding this esteemed event marks a significant milestone, and I am truly eager to see our community gather to honour advances in materials science and engineering. ICMPC 2025 emphasizes the crucial importance of materials and their characterization in fueling the nation's scientific progress and societal advancement.

As global demands escalate, deepening our understanding of innovative, functionally graded, and custom-designed materials is key to spurring innovation and securing sustainable growth. The conference is a unique opportunity to connect with top experts from academia, industry, research organizations, and professional engineering communities, sharing groundbreaking insights and experiences in advanced materials processing and characterization.

The peer-reviewed and accepted papers presented at ICMPC 2025 have been curated and compiled into conference proceedings, scheduled for publication by IOP and indexed in Scopus. As the editor of this ICMPC 2025 special issue, I sincerely thank the plenary speakers, authors, participants, reviewers, and organizing team for their valuable contributions.

Scientific collaborations and advancements are rarely achieved in isolation. Progress often results from interdisciplinary teamwork and international cooperative efforts. It is essential for our institution to persist in forging connections—with academic peers, global research entities, and society at large—to cultivate a dynamic ecosystem of shared knowledge and innovation.

Moving forward, our focus will be on empowering young researchers, enhancing research infrastructure, fostering innovative projects, and advancing ethical, inclusive, and responsible science. This conference serves as a catalyst for advancing scientific knowledge, fostering collaborations, and inspiring future research. I am confident that the discussions and insights here will drive significant discoveries and lead us toward a more robust and innovative research landscape. Thank you, and I hope all participants have a productive and inspiring conference.



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About Conference

Functional materials, smart materials, intelligent materials – whatever you call them, they will be a key pillar of 21st century technology. Among the modern structural materials there has been a tremendous advancement in science and technology of materials. In recent years, nanostructure materials and nano composites have become increasingly important because of their remarkable properties and permanently growing areas for practical applications. Various aspects of mechanical properties of nano materials including analytical and computational modelling in combination with comprehensive experimental analysis of mechanical behaviour is yet to be investigated. Despite the rapid progress in this field, mechanical properties of nano materials and composites are still remaining terra incognita in materials science. In the field of massive and complex manufacturing we are now in need of materials, with properties, which can be manipulated according to our needs.

The conference is creating a cross disciplinary summit that transcends departmental, institutional, industrial, public, and private research organizations and global barriers and lends itself to the integration of research and education in the vital field of advanced materials. This conference aims in major sectors of advanced processing, material characterization, modelling and simulation, properties, performance, and device fabrication.

Scope of the Conference

The role of manufacturing in the country’s economy and societal development has long been established through their wealth creation activities. Deepen and broaden our knowledge of materials and to increase innovation and responsiveness to ever-increasing international needs, more in-depth studies of functionally graded materials/ tailor-made materials are needed at present. The objective of this conference is to bring together experts from academic institutions, industries and research organizations and professional engineers for sharing of knowledge, expertise and experience in the emerging trends related to advanced materials processing, and characterization. The conference is structured as follows: plenary lectures followed by parallel sessions. The plenary lectures will be delivered by eminent personalities of international repute to introduce the theme of the conference. Each parallel session starts with an invited talk on specific topic followed by contributed papers. Papers are invited from the prospective authors from industries, academic institutions, and R&D organizations and from professional engineers.

Important Dates

Deadlines	
01 December 2024	Call for Paper Start
01 February 2025	Paper Acceptance Start
01 March 2025	Registration Open
05 November 2025	Early Bird Registration End
10 November 2025	Regular Paper Submission End
Conference days 27 - 29 November 2025	

Registrations

Registration Details	Early Bird	Regular
Regular (Academic/Company)	USD 300	USD 350
Students	USD 250	USD 300
Additional Paper	20% Discount	
Participant/Attendee/Guest	USD 150	USD 150

Conference Topics

Material Characterization (Room and at Elevated Temperatures)	Applications FEA	Multi-Physics Coupling Simulation and Optimization
Sustainable Materials	Composite And Polymer Manufacturing	Nano materials
Green Manufacturing	Composites, Intermetallic	Non-destructive Examination
Shape Memory Alloys	Fabrication Process of Nano Materials and Nano Devices	Numerical Modelling and Simulation
Environmental Aspects of Traditional Materials	Functionally Graded Materials	Optimization Techniques
High Strain Rate Deformation of Materials	Future Generation Materials	Powder Metallurgy and Ceramic Forming
Biomaterials	Heat Treatment	Recycling and re-manufacturing of Materials and Components
Advanced Machining Processes	High-Energy Beam Processing	SMART materials
Advanced Metal Forming, Bending, Welding & Casting Techniques	High-Speed And Hybrid Machining	Super Alloys
Alternate Materials /Material Substitution	Laser Based Manufacturing	Thermally Enhanced Processes and Materials





Proceedings of previous ICMPC

16 ICMPC 2024, Nirma University, Ahmedabad 27-29 June 2024



Publication partners

- International Journal on Interactive Design and Manufacturing (IJIDeM)
- Advances in Materials and Processing Technologies (AMPT)
- Cogent Engineering
- E3S
- AIP

15 ICMPC 2023, Northumbria University Newcastle, England 05-08 September 2023



Publication partners

- E3S
- AIP

14 ICMPC 2022, GRIET Hyderabad 24-26 March 2022



Publication partners

- International Journal on Interactive Design and Manufacturing (IJIDeM)
- Advances in Materials and Processing Technologies (AMPT)
- Archives of Metallurgy and Materials
- Materials Today: Proceedings
- AIP

13 ICMPC 2021, NITTR Chandigarh 06-09 October 2021



Publication partners

- Advances in Materials and Processing Technologies (AMPT)
- Lecture Notes in Mechanical Engineering
- E3S

KEYNOTE SPEAKERS



Prof. Swadesh Kumar Singh
Professor, GRIET, Hyderabad, India.
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Dr. Swadesh Kumar Singh, Professor & Dean R&D working at GRIET. He has done his M.Tech and Doctoral degree from IIT Delhi and specialized in Metal forming. He has worked in Indian Engineering Services (IES) as Assistant Executive Engineer. He has published 233 research papers in reputed international and national journals. He is awarded with “Career Award for young teachers by AICTE” and “Young Scientist award” by DST for his research projects. He authored the books on Production Engineering, Industrial Engineering, Reasoning and Aptitude for standard publications. He is the driving force of the latest technologies in material science which steer the students to adapt to the changes. Areas of Interest includes Sheet Metal Forming, FE Simulation, Characterization of Materials



Dr. Amin Ahmad Razali
*Research Scientist, Research and Development,
polymer science and Technologies
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Dr. Amin Ahmad Razali is a polymer scientist with over 17 years of experience in research, development, and technology management across both industrial and academic settings. He holds a PhD in Polymer Engineering from University Sains Malaysia, where he also earned his master’s and bachelor’s degrees. His expertise centers on water-soluble and bio-polymers, with a particular focus on biopolymer characterization, molecular design, and flow behaviour. Dr.Amin currently serves as Technology Program Manager for the Special Chemical Cluster at PETRONAS Research Sdn Bhd (PRSB), based in Bangi, Selangor. His work supports PETRONAS’ Moving Forward Together (MFT 50.30.0) initiative, driving innovation to create new business opportunities while advancing low-carbon technologies.



Prof. Khaled Abou-El-Hossein
*Executive Dean, Faculty of Engineering &
Technology, Vaal University of Technology,
South Africa.*
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Prof Abou-El-Hossein is a distinguished academic leader who currently serves as the Dean of the Faculty of Engineering and Technology at Vaal University of Technology. With an impressive tenure of over 24 years in academia, he has made substantial contributions to the field of mechanical, mechatronics engineering, and advanced high-precision manufacturing. Having held administrative positions such as Head of Engineering Departments and Director of the School of Engineering at various prestigious universities in Malaysia and South Africa, Prof Abou-El-Hossein possesses extensive experience in academic administration. His leadership skills and expertise have played a crucial role in the development and success of engineering education at these institutions.



Prof. Wahidul Biswas
*Faculty of Science and Engineering
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Prof. Wahidul Biswas is a Professor at the School of Civil and Mechanical Engineering in Curtin University. He has carried out extensive life cycle assessment research on greenhouse gas emissions from the Australian agricultural, alternative fuels, building and construction, manufacturing, mining and water sectors. He recently completed a project on the LCA of iron ore/steel, alumina and cement with Australian National University, Queensland University of Technology and the University of Adelaide for South 32, FMG, Rio Tinto, Alcoa, GFG, Adelaide Brighton, which enabled him to secure two ongoing projects on green steel and green certification from the Australian National University. Wiley just published his textbook on Engineering for Sustainable Development: Theory and Practice which he developed based on his 17 years teaching at Curtin.



Prof. Mohammad Yeakub Ali
*Professor in Mechanical Engineering at
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Prof Mohammad Yeakub Ali is a Professor in Mechanical Engineering at Universiti Teknologi Brunei. Presently he is holding the position Deputy Dean (Research), Faculty of Engineering. Dr. Ali was a Professor in the Department of Manufacturing and Materials Engineering at International Islamic University Malaysia (IIUM) where he works for 15 years. In addition to teaching and research, he also served as head of the department, Deputy Dean (Postgraduate) and other responsibilities at IIUM. He earned B.Sc. in Mechanical Engineering from Bangladesh University of Engineering and Technology, Dhaka, MEng in Manufacturing Systems Engineering from Asian Institute of Technology, Thailand, and PhD. in Mechanical Engineering from Nanyang Technological University, Singapore. His research interests include materials processing, micromachining and nanomachining. He has supervised 30 master’s and PhD candidates and published more than 250 articles in journal and conference proceedings. Dr. Ali has contributed to biannual Brunei International Conference on Engineering and Technology 2021 as a Technical Chair.



Prof. Nitin Muttli
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UPES University, Dehradun, India.*
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Dr Nitin Muttli currently working in UPES University, Dehradun, India. he was a senior lecturer and leader of the Water Resources research group in the College of Sport, Health & Engineering at Victoria University (VU), Australia. Prior to joining VU in 2007, Nitin worked as a research fellow at the National University of Singapore and at the University of Hong Kong. During this time, he worked on various projects including developing a hydrologic model for the Marina Bay in Singapore and a data-driven model to predict algal blooms at Tolo Harbour in Hong Kong. The results of these projects have been published and well cited in highly ranked journals and international conferences. At VU, Nitin has further developed his research expertise in the areas of urban drainage modelling and flood control, water sensitive urban design (WSUD) and impacts of climate change on water resources. Along with colleagues from the Water Resources research group, Nitin has been extensively involved in collaborative research projects (with various local councils, water utility companies and so on) and supervision of postgraduate students.



Dr. Bijaya Bijeta Nayak
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Dr Bijaya Bijeta Nayak is currently working as an Associate Professor in the School of Mechanical Engineering at Kalinga Institute of Industrial Technology, Odisha, India. She earned her Ph.D. in Production Engineering from the Department of Mechanical Engineering, National Institute of Technology (NIT) Rourkela, India. Her research expertise includes advanced manufacturing processes, composite material fabrication, process modelling, quality engineering, and renewable energy technologies. Dr. Nayak has a strong scholarly footprint, with more than 70 research papers published in reputed international journals and conference proceedings. She has supervised ten postgraduate and two Ph.D. scholars. She has authored two text books in her areas of specialization and holds nine granted patents. Dr. Nayak is actively engaged in the academic and research community and holds memberships in several professional bodies, including the Indian Society for Technical Education (ISTE), IEANG, AMIEE, Soft Computing Research Society, and the Environmental Conservation Society.



Dr. Kaushik Kumar
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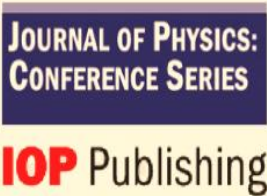
Dr. Kaushik Kumar holds a Ph.D. in Engineering from Jadavpur University, India, an MBA in Marketing Management from Indira Gandhi National Open University, India and a Bachelor of Technology from Regional Engineering College (Now National Institute of Technology), Warangal, India. For 11 years, he worked in a manufacturing unit of Global repute. He is currently working as a Professor in the Department of Mechanical Engineering, Birla Institute of Technology, Mesra, Ranchi, India. He has 23 Years of Teaching and Research Experience. His research interests include Composites, Optimization, Non-Conventional Machining, CAD / CAM, Rapid Prototyping and Quality Management Systems towards product development for societal and industrial usage and has received 45+ patents for them most of which are donated to Start-ups and Industrial fraternity through Jharkhand Small Industries Association (JSIA). He has published 60+ Books (They are referred as Text Books and Reference Books by 40+ Universities / Institutes in their academic curriculum), 100+ Book Chapters and 200+ Research Papers in peer-reviewed reputed national and international journals.



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Professor Sujan Debnath is a Chartered Professional Engineer (IMechE, UK) with a Ph.D. in Mechanical Engineering and over 23 years of experience in research, teaching, consulting, and academic leadership. His expertise in bio-composites and sustainable manufacturing has earned global recognition through publications, collaborations, and inclusion in the Stanford/Elsevier Top 2% Scientist Ranking (2024-2025). He has secured multiple high-value research and consultancy grants, co-authored the book Fundamentals of Biomaterials (Springer Nature, 2023), and published over 150 indexed journal papers with 5,800+ citations and a h-index of 31 (SCOPUS). His contributions have been recognised with Curtin Malaysia's High Impact Researcher Awards (2022–2024) and the Curtin Excellence and Innovation in Teaching Award (2023). Prof. Debnath is a Fellow of the Institute of Materials Malaysia, Adjunct Professor at Vaal University of Technology, South Africa. He actively contributes to the global research community as an editorial board member, conference organiser, and keynote speaker, and currently chairs ICMPC 2025.

Publication partners for 17th ICMPC



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Programmes

Date: 27 November 2025, Thursday (Day 1)
Conference Venue: Imperial Hotel Miri, Level 5
10: 45 to 14:30

Time	Activity	Room
08:00 – 09:00	Registration Foyer	
09:00 – 10:15	Opening Ceremony (Ballroom 1)	
10:15– 10:45	Morning Tea / Poster Presentation (Ballroom 2 / Foyer)	

Keynote Speech (Ballroom 1)	
10:45 – 11:15	Keynote 1: Prof. Swadesh Kumar Singh, GRIET, India and Prof. Nitin from UPES, India Industrial Hemp: Nature’s Blueprint for Sustainable Materials
11:15 – 11:45	Keynote 2: Dr. Khairul Hafiz Sharkawi, Head of Research & Product Development, SDEC Accelerating Materials Discovery and Development: The Digital Advantage
11:45 – 12:15	Keynote 3: Dr. Siew Eng Fui, Press Metal, Bintulu Primary Aluminium Smelting Industry Challenges and Research Opportunities
12:15 – 12:45	Keynote 4: Prof. Khaled Abou-El-Hossein, Vaal University of Technology, South Africa Ultra-High Precision Machining of Optical Mould Inserts
12:45 – 14:00	Lunch / Poster Presentation (Ballroom 2 / Foyer)
14:00 – 14:30	Keynote 5: Prof. Wahidul Biswas, Curtin University, Australia Barriers and Challenges to Achieving Net Zero GHG Emissions - Implications of Unsustainable Material Processing and Consumption
14:30 – 15:30	Workshop Season-1 by Prof. Wahidul Biswas (Decarbonisation Strategy for Material and Manufacturing Processes)
15:30 – 16:00	Afternoon Break
16:00 – 17:00	Workshop Season-2 by Prof. Wahidul Biswas (Decarbonisation Strategy for Material and Manufacturing Processes)

Parallel Sessions

Room	Session Chairs	Time 14:30 – 17:00
Danum 1 (Material Characterization)	Asso. Prof. Law Ming Chiat, Dr. Nilotpla bej	216, 221, 225, 228, 239, 242, 252, 736
Danum 2 (Manufacturing Process)	Dr. Murahari Kolli, Asso. Prof. Jundika Candra Kurnia	711, 743, 747, 756, 763, 1705, 1605, 104
Danum 3 (Process Optimization)	Dr. Mohd Amin Bin Ahmad Razali, Dr. Haider Hamad Ghayeb	922, 926, 979, 1549, 1752, 1735, 152, 1663
Danum 4 (Finite Element Analysis)	Dr Wahyu Caesarendra, Dr Gyanesh Tripathi	1009, 1015, 1019, 1021, 1026, 1029, 144, 1551
Palm Terrace (Advanced Materials Processing)	Dr. Paran Gani, Dr. Hima Bindu Valiveti	1307, 1316, 1324, 1325, 1345, 1359, 169, 941
Online-1	Dr Mouaz Kouzbary	134, 188, 235, 1711, 978, 1719, 1573, 1586, 965, 191

Poster Session-1 (Ballroom 1) 10:15 – 10:45 Session Chair- Dr. Lee Yih Nin	Poster Session-2 (Ballroom 1) 12:45 – 13:15 Session Chair- Dr. A Anitha Lakshmi
159	1747
909	1362
917	1622
932	1745
1555	759





Keynote Speech

Date: 28 November 2025, Friday (Day 2)
Conference Venue: Imperial Hotel Miri, Level 5
8: 00 to 11:00

Keynote Speech (Ballroom 1)	
08:00-08:30	Registration Foyer
08:30-09:00	Keynote 8: Prof. Mohammad Yeakub Ali, Universiti Teknologi Brunei (UTB), Brunei Electro Discharge Machining of Non-Conductive Ceramics
09:00-09:30	Keynote 9: Dr. Mohd Amin bin Ahmad Razali, Rheology Behaviour of Copolymer PHBV and Their Blends
09:30-10:00	Morning Tea (Ballroom 2)
10:00-10:30	Keynote 10: Asso Prof. Bijaya Bijeta Nayak, Kalinga Institute of Industrial Technology (KIIT), India. Precision in Dentistry: 3D Printed Implant Screws Through Direct Metal Sintering
10:30-11:00	Keynote 11: Prof. Kaushik Kumar, Birla Institute of Technology (BIT), India Unique Industrial Applications of Additive Manufacturing
11:00-11:30	Keynote 12: Prof. Dr. Sujan Debnath, Curtin University Malaysia An Andragogical Reflection on an Industry-Sponsored Advanced Material PhD Research Project

Parallel Sessions (Day 2)

Time SST (Singapore Standard Time)						
Room	Session Chairs	11:30 – 13:00	13:00-14:00	Session Chairs	14:00-15:45	15:45-16:00
Ballroom 1	Dr. Jugge Praveen Dr Leong Kong Yong	1669, 1672, 1678, 1694, 1697, 1656	LUNCH Break	Dr. Wahyu Caesarendra	1723, 1709, 1710, 1715, 186, 1639	TEA Break
Danum 1	Dr. Hasliza Bahruji, Dr. MD. Ahasan	211, 246, 249, 198, 1385, 1652,	Ballroom 2	Dr. Haider Hamad Ghayeb	992, 1327, 1618, 1589, 1726, 195	Ballroom 2
Danum 2	Dr. Paran Gani, Dr. Ashlin Deepa R N	766, 768, 781, 784, 987, 1722		Dr. Murahari Kolli	179, 180, 1632, 165, 1336	
Danum 3	Dr Gyanesh Tripathi, Dr. Lee Yih Nin	985, 787, 998, 1626, 943, 219		Dr. Nitin Sahai	1332, 101, 1548	
Danum 4	Dr. Nilotpla bej Dr. Hima Bindu Valiveti	1032, 1039, 1044, 175, 1647, 166				
Palm Terrace	Dr. Buddi Tanya Ir. Meheron Selowara Joo	1365, 1374, 1379, 1382, 1532, 1546				
Online-2	Dr. Kosaraju Satyanarayana	110, 130, 106, 161, 132, 773		Asso. Prof. Jundika Candra Kurnia	196, 202, 207, 716, 983, 1389, 1396	
Online-3	Dr. Bobba Phaneendra Babu	968, 971, 974, 982, 996, 1002, 1329		Dr. Lade Jayahari	1303, 1321, 237, 1339, 1341, 1349	
Online-4	Dr. Srikala Pangannaya	722, 729, 731, 776, 952, 961, 141		Dr. Udaya Sri Kakarla	1352, 1356, 1369, 1591, 1596, 1599	
Online-5	Dr. Shashi Ranjan Singh	1608, 792, 1350, 1685, 1689, 719				

19:00- 21:00	Gala Dinner cum Closing Ceremony	Ballroom 2
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Date: 29 November 2025, Saturday (Day 3) Conference Venue: Imperial Hotel Miri, Level 5 8: 00 to 11:00
Option 1: Miri City Tour (4 hours) subject to payment
Option 2: Niah Cave Day Trip (Full Day) subject to payment; physical fitness required

Miri City Tour (4 hours) subject to payment

- Departure from: Imperial Hotel Miri, Lobby
- Note: Tentatively planned and subject to change based on time, traffic, weather and group preferences

Time	Location	Activity Highlights
08:00 – 08:30	Depart / Drive through Piasau Nature Reserve & Lutong Beach	Scenic drive; mention hornbill habitat
08:00 – 09:15	Curtin University Malaysia	Brief campus stop; external view or quick walk on campus if permitted
09:15 – 10:00	Canada Hill	Visit Malaysia’s first oil well “Grand Old Lady”; city view
10:00 – 10:15	Miri Handicraft Centre	Explore/purchase Sarawak handicrafts (textiles, beads, woodcrafts)
10:15 – 10:45	Tamu Muhibbah Market	Local produce, wild fruits, cultural experience
10:45 – 11:50	Coco Cabana & Marina Bay	Visit Seahorse Lighthouse, drive through murals, seafront area, nearby old temple or fish market
11:50 – 12:00	Return	

Option 2: Niah Cave Day Trip (Full Day) subject to payment; physical fitness required

- <https://whc.unesco.org/en/list/1014/gallery/>
- <https://sarawakforestry.com/parks-and-reserves/niah-national-park/>

Workshop

(Decarbonisation Strategy for Material and Manufacturing Processes)

27 November 2025, Thursday (Day 1)

Time 14:30 – 17:00 - Ballroom 1

Prof. Wahidul Biswas

How can a life cycle assessment drive decarbonisation strategy for material and manufacturing processes?

Life cycle assessment (LCA) is a decision-support tool that enables planners, policy makers, managers, developers, engineers, and scientists to determine strategies to address social, economic, and environmental impacts or sustainability challenges associated with raw material acquisition, production, use and the end of life (EoL) management of any products. LCA mainly consists of three tools, including environmental life cycle assessment (ELCA) for determining environmental impacts or indicators, life cycle cost (LCC) for determining economic indicators and social life cycle assessment (SLCA) for determining social indicators.

Followed by a 30-minute theoretical presentation, this session includes a practical, hands-on activity to determine decarbonization strategies for producing low carbon products. The participants will learn how to apply an ELCA tool to achieve a low carbon material and manufacturing process by identifying decarbonization strategies. Fifty minutes will be allocated for this activity consisting of briefing, participation and consultation, modelling exercise and a group presentation near the end of the workshop. This activity will be performed by groups of 3 to 4 participants, and each participant is expected to have a laptop as the activity includes an excel spreadsheet type modelling exercise. In exceptional situations, one laptop can be shared by 2 participants.





Presentation List

Sl. No.	Paper ID	Paper Title	Author Names (*Presenter)
1	101	Structural Strength Analysis of Horizontal Axis Pelton Turbine Bucket	Farerio Reyvinda Farel, Sri Utami Handayani , Ojo Kurdi, Didik Ariwibowo, Alvian Irfan Ramadhan, Faris Akil Mulia Akhlis, Funky Mustika Asmoro, Auliya Rizky Ramadhanti
2	104	Randomized trial controlled protocol for Prevalence of Patellofemoral Pain in Hilly Terrain and its Conservative Management for Distal Factors	J. P. Darjee, Nitin Sahai*
3	106	Effect of Bamboo Powder and Wheat husk addition in Soy Husk Reinforced Epoxy Composites	Archana Nigrawal* , Arun Kumar Sharma, Angothu Saida, Yerrarapu Sravani Devi Fozia Z Haque
4	110	Innovative Infrastructure: Harnessing C&D Waste in Rigid Pavement Performance	Ayyagari Lakshmi Prasanna* , Sk. Rajya Jasmine, A. Akhil Reddy, S. Lurdhu Kiran Kumar, A. Nagalakshmi, Vinod Yadav
5	130	Improvising the efficiency of solar still of sea water using nano materials	Singarapu Sathish* , Pamugari Manisha, Peraboina Madhavi, Suneetha Bobbillapati
6	132	The Effect of Corn Cob Ash and Silica Fume on the Geotechnical Properties of the Expansive Soil	G. Bhargavi, S. Sravya, A. Tanmayee, C.S. Abu Bakar Siddiq, Jagadish Shrisaila Haranatti* , P Naga Sowjanya
7	134	Fabrication and Characterization of Rice Husk Ash Reinforced Aluminium Matrix Composite	Kota Rahul Raj, Manish Kadala Keloth, Athul Sharma, Gunti Nitin Kumar, Jhade Srinivas* , Ram Subbiah
8	141	Design of a Smart Conveyor Prototype with IoT and Barcode Integration for Workshop Tool Return and Inventory Control	Nur Amal Syahirah* , Fadhilah Narawi and Hayati Yassin
9	144	Residual Attention-Enhanced Deep Learning Model for Robust Detection of Steel Surface Defects	Sandhya Tuti, A Sai Chander* , Venumula Varsitha, Rakesh Goud Appala, Vanekari Jahnvi, G. Ramesh
10	152	Influence of Horizontal and Vertical Cold Joints on the Concrete Strengths	Qasim Abd-Alla* , Muna Mohammed, Haider Hamad Ghayeb
11	159	Upgrading of thermoplastic post-consumer wastes for the circular economy in Poland: rheological characteristics	Dorota Czarnecka-Komorowska* , Karolina Wyszumirska, Olga Mysiukiewicz, Katarzyna Gawdzińska
12	161	Barriers to Green Chemistry Adoption in India: Implications for Sustainable Materials Processing	Hemant K. Upadhyay* , Reena Yadav, Deepen Banoriya, Nara Kalyani, Ch. Vidyadhari
13	165	Role of AR-Coated PMMA Lenses in Improving Retinal Image Fidelity for Deep Learning Glaucoma Detection	Yerrarapu Sravani Devi* , Mahesh Kumar Morampudi, Allam Leela Kumari, Gandham Sandhya, Angothu Saida
14	166	Effect of Insulating Materials on the performance of cold storage	Kashi Ram Aharwal* , Prashant Pathak; Vijay Kumar Dohare
15	169	Reliability evaluation of dielectric materials by accelerated low-temperature aging tests in LN ₂	Sk.Md. Shareef* , B. Baddu Naik, B.Giridhararao, Satish, Naga Ashok, Rathana Chary



16	175	Empower Diesel Engine Performance Using Fuel Blends with Candlenut Oil (Aleurites Moluccana)	Rizqi Fitri Naryanto , Rizki Setiadi, Muhammad Affissena Wiratama, Bagus Widya Utama, Wahyu Caesarendra, Kriswanto, Rahmat Doni Widodo
17	179	Plastic Waste Management Laws in Bangladesh and SAARC: Legal Frameworks Driving Sustainable Materials Processing and Circular Economy	Tahira Attia Fariha , Mohammed Belayet Hossain, Chai Lee Goi
18	180	Strengthening the Legal Frameworks for Green Manufacturing in Bangladesh: Realising its Exigency with a Comparative Analysis	Ramisa Jahan* , Mohammed Belayet Hossain
19	186	Three Dimensional Finite Element Analysis of Dental Implant Screw: Effect of Thread Angle Variations on Stress Distribution	Bijaya Bijeta Nayak , Shiv Sankar Das, Santosh Kumar Nayak, Basanta Kumar Nanda, Rita Sahu
20	188	Experimental Research Study on the technical and strength properties of concrete with partial replacement of granite Industry waste dust.	Gunjuluri Anvesh* , Sathvika Bonthapally, Saisreekar Mandala, Sai Pranav Ankolla, Raj Kumar Badhavath, C. Vivek Kumar
21	191	Enhancing concrete performance through self curing: a synthetic study of PEG400, plastic and GGBS	E. Anusha, B. Gowtham, P. Yashwanth, S. Bhaskar, M. Rathna Chary* , N.M. Subhani
22	195	Si/SiC-Based Junctionless Field-Effect Transistors A Material Characteristics and Sustainable Device Perspectives	Beemanpally Vandana* , B Shivilal Patro2, Jitender Kumar Das2, B Ch Nookaraju3
23	196	Preparation and Analysis of Multi Gripper Prosthetic Hand Using Acrylonitrile Butadiene Styrene Material	Mendi Venkannababu* , N. Meghanadh, N. Suresh, M. Ramanjaneyulu, J. Arun, Sathish Sinagarapu
24	198	Hyperparameter-tuned machine learning models for accurate concrete strength prediction	Srinivasa Reddy Vempada, Gyanesh Tripathi* , Pothula Mahesh, Godasu Bhargavi, Bonagiri Ravindar
25	202	Study on Concrete with Partial Replacement of Cement by Rice Husk Ash	Sk.Sydha* , P. Peddabbai, M. Manoj, M. Venkateswara Reddy, Y. Narendra, K. Charan Kumar, Sai Kumar Chary
26	207	Optimizing the Composition of Gypsum Powder and Birla White for the Development of Dustless Chalk Pieces	P. Srinivasa Rao* , G. Ganesh Pavan, U. Lokesh, J. Sri Lakshmi Nilendra, B. Syam Babu, Avinash Kumar
27	211	Enhancing the Performance of Electric Materials by Regulating their Properties via Hot Isostatic Pressing	Sk.Md. Shareef* , B. Swarupa Rani, P.Bindu Srinivasu, E.Kesavarao, Sk.Mansoor, C.Lavanya
28	216	Prediction of Material Selection Using AIML	B Venkatasiva* , L Ramababu, A Tirumalaraju, K Karthik1, D Appalanaidu, Keshavendra Choudhary
29	219	Design and Investigation of a FR4 Material LowProfile MIMO Antenna with Dual Pentagon Patches and U Shape Slots with Partial Ground for Wireless Applications	Venkata Lakshmaiah Y, Rama Tulasi A* , Lakshmi Manasa G, Gopi U, Venkata Sai P, G V Prasad
30	221	Smart Colorimetric Sensing of Acetate in E. coli: A Step Toward Responsive Biomaterials	Srikala Pangannaya* , Muskan, K Himabindu



31	225	Mechanical and wear properties of friction stir processing AA6082/SiCnp aluminium matrix composites	Aryan Balaji, Waseem Shareef, Rahul Thota, A Anitha Lakshmi* , G. Naveen
32	228	An Examination of Direct Metal Laser Sintering Parameter Influence on the Microstructural Evolution of AlSi10Mg alloy	Tanya Buddi* , Sai Sri Vasthav Danda, Aryan Chopdar, Hemanth Ganesh Adapa, Ramatenki Chinna, Sireesha Koneru, Boggarapu Nageswara Rao
33	235	Computational Analysis and Material Optimization of Protective Cage Structures Against FPV Kamikaze Drone Delivered Explosive Payloads	Anuj Kumar Sharma , P K Sharma, Rajat Kumar Panigrahi
34	237	Progress of Metal Matrix Composites by Powder Metallurgy process using Cold Isostatic Compaction Chamber: A Review	Gaurav Bajpai* , Anurag Namdev, Mahendra Munirathnam, M. Chandra Sekhar, Keshavendra Choudhary
35	239	Thermal Conversion of Used Zinc Batteries into Zinc Oxide Nanoparticles and Energy Recovery from E-Waste	Mahendra Munirathnam , Kancharakuntla Shirisha, B. Sambasivaiah, Shilpa Telang, M. Chandra Sekhar
36	242	Role of clay sediment environments in synthesis of Gas Hydrates using non-stirred and stirred reactors.	Radhika Ikkurti, Saritha Dasari, Pallavi Shastrula, Mahendra Munirathnam, T.V.V.Pavan Kumar*
37	246	G-Eye: Material-Optimized 3D-Printed Smartphone Fundus Imaging Device	Maddala Seetha* , Mallepally Anusha, Vavilala Divya Raj, Radhika Ikkurti, K. Raju
38	249	Green-Synthesized Co ₃ O ₄ Nanoparticles: Structural, Vibrational, Magnetic, and Electrochemical Insights for High-Performance Energy Storage Applications	Ooruchintala Obulesu , Nomula Divya, Dadamiah PMD Shaik, Motukuri Sirisha, K Madhavi
39	252	Fabrication and Mechanical Characteristics of Pineapple fiber reinforced epoxy composites	Shailesh Kumar* , Adesh Kumar, Surabhi Purohit, Nayan Rai, K Prasanna Lakshmi
40	711	Performance Evaluation of Eco- friendly Geopolymer Concrete: An Experimental Approach.	Kotha Hima Bindu* , Dosada Akshaya, Aakam Praveen, Kurimela Vivek, Donda Mahesh, O.S.D. Hima Bindu
41	716	Strength Analysis of Concrete by Partial Replacement of Cement with Coal Powder and Paper sludge	Karanam Bhargav, Omnath Prajapati, Chidrawar Vaishnavi, Burramukku Sumith, Miryala Vijayakumar* , B.V. Srinivasa Rao
42	719	Flame Retardant4 Material Circular Patch Microstrip Antenna with Dual-Band Operation for X- And KuBand Uses	Venkata Lakshmaiah Y* , Komal Sai B, Sanjay G, Sk. S. Moulali, K Mukesh P, K Swaraja
43	722	Design of a Cross-Shaped Microstrip Patch Antenna Using Duroid Material for 5G Applications	Md Javeed Ahammed* , S.V. Mohana Rao Cherukupalli, Siva Krishna Yemineni, Siva Sai Surya Kumar Vellanki, Yogeswararao Sriram, G Ravi Kumar
44	729	Properties of Concrete with Egg Shell Powder as Cement Replacement	N.M. Subhani* , Sk. Ismail, CH. Amarnadh, Sk.Md. Althaf, Rakesh Raj, B. Uday Manikanta, C. Vivek Kumar
45	731	Assessment of Strength Properties of Concrete Containing Calcium Carbonate Powder as Partial Replacement of Cement	N. M. Subhani* , A. Manohar, Sunney Deavl, Sanchit Kumar, U. Pedda Venkateswarlu, N. Chandra Shaker, Harshvardhan Rajpurohit
46	736	Influence of Process Parameters on Friction Stir Welding of AA5083 and AA6061: An RSM Approach	Kosaraju Satyanarayana, Murahari Kolli* , Pujari Anilkumar, A.V.S Ram Prasad, Gourav Singh



47	743	Thiadiazole-Based Stimuli-Responsive Organic Receptors for Smart Biomaterial Applications	Srikala Pangannaya* , Muskan, G. Nagaraju
48	747	Design of a Hexagonal Microstrip Patch Antenna on FR4 Material with Notch Characteristics for C-Band Applications	K. Raju, K Amrutha* , G Bhargava, M Jyothi, Shaik Turimella Khaja Fir & Manish Vishwakarma
49	756	Material and Structural Spacer Strategies for Advanced 10nm FinFET Design	Modem Vaishnavi, M.Sri Umasuseela, Hima Bindu Valiveti* , Veera Venkata Sai Amudalapalli, T. Sandhya
50	759	Analysing the modulus of rigidity for various thread materials using trifilar suspension method	Samuel K. W. Chena* , M. M. Reddya, A.H.Abdullah, S Debnatha, Sethuramalingam Prabhu B, NS Reddyc
51	763	A Physics-Informed Conditional GAN Framework with Multi-Objective Optimization for Automated Design of Acoustic Metamaterials	Praveen Jugge* , Jaya Prakash Reddy Peram And G. Ramesh, Jhade Srinivas
52	766	AI-Assisted Sustainable Material Processing, Characterization, and Quality in Solar Panel Fabrication	Bola Sasidhar* , Kanchamreddy Gnana Prasuna, Madhav Latha Munagapati, Sivashankar Namani, Rambabu Mudusu
53	768	Nano-Engineered Coatings and Polymer-Based Lens Materials for Enhanced Retinal Imaging in Diabetic Retinopathy Screening	Maddala Seetha* , Tummati Swapna, Allam Leela Kumari, Choppakatla Arathi, K. Madhavi
54	773	Analytical Analysis of TiO2 deposited layer in Solar Cell	Srinivasa Rao Davu* , Tejavathuramesh, Suresh Kumar Tummal, B Phaneendra Babu, Penugonda Suresh Babu
55	776	Orthopaedic Implant Materials for Femoral Fixation: From Conventional Metals to Biodegradable Alternatives	Gourav Singh* , Ajay Pandey, Harshvardhan Rajpurohit and L Raghu Kumar
56	781	Advancing Fundus Imaging for Glaucoma Detection Using N-BK7 Optical Glass and Deep Learning Models	Nara. Kalyani* , Tummati Swapna, Vavilala. Divya Raj, Kommanaboyina Lakshmi Sundara Soujanya, Ch. Vidyadhari
57	784	Assistive Object Detection and Voice Navigation System Leveraging Silver Nanoparticle Technology	Sunitha Devi P* , M.Lalitha, R.Pallavi Reddy, O.Sujana, P.Gopala Krishna
58	787	Nanomaterial-Integrated, AI-Based Biocompatible Imaging for Early Glaucoma Detection	Nara Kalyani , Mallepally Anusha, Allam Leela Kumari, R.Pallavi Reddy, Pathuri Srinivasa Rao
59	792	Retained Austenite Transformation and Its Role in the Toughness and Strength of Nano Bainitic Steels: A Critical Review	Vidhya Mehra* , Sachin Kumar Nikam, Rajan Kumar, Channamallappa Bhagyashree, R.P.Ram Kumar
60	909	Selected properties of recycled composites for river buoy applications	Katarzyna Bryll* , Karolina Baszak, Patryk Stankiewicz, Paweł Szymański, Janusz Uriasz And Amelia Miesiąc
61	917	Proposal to use polymer concrete with recycled fraction as ballast for navigation buoys	Katarzyna Gawdzińska* , Jakub Tyszka, Dorota Czarnecka-Komorowska, Waldemar Matysiak, Paweł Popielarski And Wiktoria Kanciak
62	922	Sustainable Fabrication Approach For Natural Fiber Composites Via Hand Lay-Up	Ravindra Singh Rana* , Adarsh Chaurasiya, Rajnish Kumar, Alok Singh, Rajesh Purohit



63	926	Exploring the Corrosion Resistance of High Entropy Alloy Coatings: Effect of Deposition Methods and Environmental Testing	Vikash Kumar* , Alok Singh, Pradip Kumar Verma, Uday Pratap Singh Bais
64	932	Studies on solidification conditions and crystal structure parameters	Jakub Hajkowski* And Mieczysław Hajkowski
65	941	A Custom Lightweight CNN for High-Accuracy Real-Time Detection of Stringing Defects in FFF	Ravi Kumar Dwivedi* , Avinash Selot
66	943	Improving Microwave Heating Uniformity for an Oil Palm Fresh Fruit Bunch Via Multi-Physics Modelling	Ming Chiat Law*
67	952	Agro-waste Reinforced Aluminium Hybrid Matrix Composite: A Sustainable Approach to Enhancing Mechanical Properties	Mohan Venkat Sai Krishna, Kavali Deepika, Kakaraparthi Satkeerthi, Khanapuram Jayasri, Govardhan Logabiraman* , Ram Subbiah
68	961	Fabrication and Characteristics Evaluation of Al 6061 (RHA +TiC) Hybrid Metal Matrix Composite	Rambabu Mudusu* , Dhanunjay Penta, Anusha Pithani, Karthik Reddy Ravulapally, Akhil Kumar Sattu, Suneel Donthamsetty
69	965	Analytical Study of the Al2O3/PKSA Influence on the Frictional and Mechanical Wear Behaviors of Al7075 Hybrid Composites	Are Akhil Kumar, Earapogu Dharma Teja, Janapati Pradeep, Padakanti Sai Ram, Angadi Seshappa* , Kandru John Babu
70	968	Experimental research on double blended concrete	Narkula Shirisha, Pagadala Fanty Bezalel, Sankella Narendar, Polepaka Sharath Kumar, Sai Kumar Chary* , M.N.S. Sambasiva Rao
71	971	Fabrication of AA6061 alloy to enhance its mechanical properties using stir casting method	Peram Kondala Rao* , P. Deekshith Reddy, Majeed Khan, R. Naresh, G. Junaid Ansari, H. Chandra
72	974	Assessment of Palm Oil Fuel Ash’s (POAF) Effectiveness as a Cement Substituent in Concrete	Garre Ravi Kumar* , Government Chakali, Padishala Akash, Shiva Kumar Pabathi, Rajesh Dayavar, T. Srinivas
73	978	Experimental Investigation on Mechanical Properties of 3D Printed ABS, PLA and PETG Specimen Processed by Fused Deposition Modeling Method	K. V. Durga Rajesh* , Tanya Buddi
74	979	Bituminous Concrete surfacing Reinforced with Charcoal from Coconut products and Rice Husks: An Experimental Study on Their Long-Term Sustainability	Chandana Chilaka* , U. Pranavi, R. Raghunatha Reddy, Bhavanasi Subbaratnam, P. Prasanna, Gaurav Bajpai
75	982	Modelling and Analysis of 2-Wheeler Piston with Granite Particles Reinforced a 356 Metal Matrix Composites	Meghavathu Mothilal Naik* , V. Narendra, P. Syam Kumar, N. Naga Sridhar, M. Gopipurna, Jahanvi Purohit
76	983	Instability analysis of hyperelastic anisotropic thick walled rotating cylindrical pressure vessel	K. V. Balwant, V. Yadav* , S. Mahto and A. Lakshmi Prasanna
77	985	Design, characterization of Novel Benzimidazole derived Schiff-Base Metal Complexes and Schiff base as Promising Anticancer Agent: Insights from Docking Studies	Pragathi Jogi* , Moumita Chakraborty, Gangi Sreekanth Reddy, Medha Bhushan, K. Kiran Chand
78	987	Synthesis and Characterization of Stir Casted Al 2024-Sic Metal Matrix Composites	Penugonda Suresh Babu*, T. Vamsi Ganesh, B. Dilleswararao, D. Prudhvi Krishna, Y. Lokesh, Gyanesh Tripathi*



79	992	Evaluation and Comparison of Mechanical Properties of 3D Printed PLA Material with Different Filling patterns	A. Pavan Kumar* , B. Sanjay Kumar, G. Sarath Kumar, S. Nagur Basha, Y. Manikanta, K. Sunil Kumar Reddy
80	996	Analysis of Steering System by using Steel, cast iron, and aluminium alloy materials	Mandula Venkaiah* , K. Mohan Krishna, S. Sai Santosh, Ch. Ganesh, G. Siva Koteswara Rao, C. S. Verma
81	998	Design of H-Shaped Square Microstrip Patch Antenna Using Copper Material	Md Javeed Ahammed* , Lanka Kusuma, Pasupuleti Manohar, Dhanyasi Mukesh, Peddeti Ravindra Babu, M. Anjaneyulu, Krishna Jyothi Nannapaneni, G Anvesh
82	1002	Development of A Low-Cost Apparatus to Measure Thermal Conductivity of Metallic and Composite Samples	Suneel Donthamsetty* , Y. Meghana, B. Lakshmi Narayana, Sk. Babulal, K. Venkata Narayana, N. Sateesh
83	1009	Automated Material Annotation Extraction from Engineering Drawings: Trends, Tools and Techniques	Ashlin Deepa R N* , Errabelli Annapoorna, Jandhyala N Murthy, Peta Sravani, C. Chandana
84	1015	Study of oxide layer characteristics on Ti6Al4V alloy in sodium bromide solution	Shashi Ranjan Singh* , Mukesh Tak, Srinivasa Reddy V
85	1019	Role of Artificial Intelligence in Electric Vehicle Battery Materials Recycling Processes, Challenges and Opportunities	Phaneendra Babu Bobba* , Mukesh M, Burle Sai Siddartha, B. Vandana
86	1021	Sustainable Preparation of Nature-Friendly Carry Bags from Recycled Waste: Material Processing and Characterization Insight with Artificial Intelligence Techniques	Bola Sasidhar* , Nandadevi Doddamane Renukeshwar, Sambangi Swathi, Y. Rajyalaxmi, G Karuna
87	1026	Coated PMMA-Based Optical Materials for Retinal Imaging: Synthesis, Characterization, and Diagnostic Applications	Yerrarapu Sravani Devi* , Mahesh Kumar Morampudi, Tallapelli Rajesh, Dantu Venkata Lalitha Parameswari, V. Venkata Rao
88	1029	Nanomaterial-Enhanced Soil Sensing and Material Characterization Approaches for Sustainable Agriculture	Nayan Rai* , Chenigaram Veena, Thushalapuram Swetha, Satvika Bachu, K Prasanna Lakshmi
89	1032	Critical Insights and Technological Advancements in Hexagonal Ferrites: A Comprehensive Review of Properties and Applications	Arathi Choppakatla* , Ravankol Anusha, Ooruchintala Obulesu, Psunil Kumar Reddy, Depally Srinivas
90	1039	Nano Sense: A Smart Graphene-Based Wristband for Early Stress Detection and Student Wellness	Sunitha Devi P* , Bhageshwari Ratkal, Ch. Mandakini, Kasoji Eshwari, Soumya Sucharita Singha
91	1044	Next Gen Patient Care: Nano Enhanced Smart Bedsheet with Real Time Alerts	Sharada Adepu* , Bhageshwari Ratkal, Ch. Mandakini, Kasoji Eshwari, Venkata Rao Yanamadni
92	1303	Enhancing Aluminium 7068 with Agro-Industrial Waste Reinforcement through the Stir Casting Method to Create a Sustainable High-Performance Hybrid Composite	Samyuktha Penta* , Surendra Tripathi, D. Chandra Sekar, Srinivasa Reddy Nallimilli, D. Srinivas, Anurag Namdev
93	1307	Microstructure, mechanical and corrosion resistance of AA7075 composites fabricated by stir casting technique	Alok Singh , Pradip Kumar Verma, Rajesh Purohit, R. S. Rana
94	1316	Effect On Output Parameters in EDM Machining of Square Blind Holes On Mdn250 Using Coated and Uncoated Electrodes	Kalyani. K* , Prabhakar Reddy.P, Saraswathamma. K
95	1321	Optimization of Process Parameters in Single Point Incremental Forming of Ti-6Al-4V Alloy Using the Taguchi Approach	Gianender Kajal , Gurpreet Singh, Piyush Mahendru, Basanta Kumar Bhuyan And Pratibha Malik



96	1324	Investigation of Microstructural and Tribological Properties in Stir-Cast Al 2024 with SiC, B4C, and Graphite Reinforcements	M. Yashwanth Kumar* , Kota Naresh, Kunuru Valmiki Dhanalakshmi, M. Venkata Ramana Reddy, D. Raghavendra
97	1325	Retrofitting the Conventional Machines for Implementation of Smart Manufacturing Technologies in SMEs in Central India	Sayak Subhra Bera, Murali Krishna Chimata* , Pradeep Kumar Soni, Srinivasulu Vardhineni
98	1327	Machine vision technology with YOLOv5 augmentation technique for metal edge and defect detection	Hayati Yassin, Ardian Webi Kirda and Wahyu Caesarendra*
99	1329	Optimization of SLM Process Parameters for IN625 to Achieve Higher Surface Quality and Micro-hardness	Podisetty Yasaraswathi* , Sindhanur Jagadeesh, Ramatenki Chinna1, Boggarapu Nageswara Rao, And Tanya Buddi
100	1332	Impact of Hybrid Micro- and Macro-Polypropylene Fibre Reinforcement on Eco-Friendly High-Strength Concrete	Chiang Ti Tan, Ming Kun Yew* , Ming Chian Yew, Jing Han Beh, Siong Kang Lim, Yee Ling Lee
101	1336	3D Printed PEGDA/HEMA– Polysaccharide Hybrid Monoliths for Aqueous Dye Adsorption	Ashreen Norman, Voon-Loong Wong* , Tze Chuen Yap, Suganti Ramarad, Chien Hwa Chong, Kean How Cheah
102	1339	Optimization Techniques in Materials Processing and Design: A Review for Accelerated Innovation	T V V Pavan Kumar* , D Srinivas, K Ramesh Babu, K. Sunil Kumar Reddy
103	1341	Printing Optimization of Properties of 3D Printer Abs Material by L9 Orthogonal Array Method	D. Raghavendra* , B. Mohan, B. Venu, K. Gowri Sankara Rao, Ch. Murali Krishna, B Ch Nookaraju
104	1345	Wear characteristics and Microstructure of fabricated Al-Zn/RHA/SiC through stir casting approach	Raghavender Gurralla* , Divya Papineniand, Akhila Reddy. K, Moka Bhishakth, Srinivasa Reddy Nallimilli, Ch. Bandhavi
105	1349	Experimentally Investigating the Sustainability of Coconut Shell Charcoal Ash and PKSA in Bituminous Concrete Pavements	Penta Samyuktha* , Venkateshwarlu S, R. Raghunatha Reddy, Srinivasa Reddy Nallimilli, N. Sateesh
106	1350	Design and Fabrication of 3D Printed Drone by Using Biodegradable Material	Thella Ashok Kumar* , A Veeranjanyulu, B Yuva Raju, M Pavan Kalyan, V Ganapathi Laxmi Naidu, Jagadish Shrisaila Haranatti
107	1352	Design and Fabrication of Radio-Controlled Plane by Using Foam Sheet Materials	Sekhar Chinthamreddy* , B. Yugandhar, K. Pavan Kumar, K. Anka Rao, V. Kishore, Peram Kondala Rao*
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