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Advances in Materials and Processing Technologies – AMPT Journal
(ESCI -Taylor & Francis) (I.F-2.2)

S.NO	Manuscript Number	Author Names	Affiliation	Paper Title
1	TMPT-2024-0077R1	Anand Patel, Mayur Makhesana, Kaushik Patel, Yug Mevada, Krushan Jain, Arvind Sankhla	Nirma University Institute of Technology India	Experimental investigations and sustainability analysis on the performance of vegetable oil-based MQL drilling of SS316L
2	TMPT-2024-0101	Satadru Kashyap, Ashraf Ali, Sushen Kirtania	Tezpur University Napam, Sonitpur District, Assam India	Mechanical testing such as tensile, flexural, impact testing was done to analyse the areca nut sheath fiber epoxy composite
3	TMPT-2024-0034	Kuldeep Kumar Saxena, Tejendra Singh Singhal, Jinesh Kumar Jain, Manoj Kumar	Lovely Professional University Ringgold ID 126208, INDIA	Comparative Investigation, Analysis, and Optimization of Weld Reinforcement During Powder-Fed Gas Metal Arc Welding of AISI 1023

4	TMPT-2024-0039	Yayat Iman Supriyatna,Ika Maria Ulfah, Widi Astuti, Slamet Sumardi, Lavita Indriani Br Ginting, Indra Pardede, Puspita Rani, Heni Fara Diba, Wahab Wahab, Himawan Tri Bayu Murti Petrus,	National Research and Innovation Agency Author Institution is Unverified,Indonesia	Optimization of TiO ₂ Synthesis from Ilmenite Sand and its Application in the Photocatalytic Process
5	TMPT-2024-0043R1	Mayurkumar Makhesana,Arvind Sankhla,Kaushik Patel, Jose Jaime Taha-Tijerina, Anand Patel, Prashant Bagga	Nirma University Institute of Technology INDIA	Effects of Hot Extrusion on Compressive Strength and Densification of Aluminium-based Metal Matrix Composites
6	TMPT-2024-0055	Din Bandhu,H. Raghavendra Rao, Mehmet Şükrü Adin, KULDEEP KUMAR SAXENA, K. Madhava Reddy, G. Suresh Kumar, P. Harishankar	Vidya Vihar Institute of Technology Purnea, Bihar INDIA	Enhancing the Mechanical Properties of Composite Films Adding Granite Powder for Sustainable Packaging Solutions
7	TMPT-2024-0062	K Saxena,Jaideep Sharma, Chitresh Nayak, Premanand S. Chauhan, R. K. Shukla,	Lovely Professional UniversityRinggold ID 126208 Phagwara, Punjab India	Investigating the Effect of Zirconium Dioxide Micro & Nano Particles on the Mechanical Characteristics of Al-7075 Alloy
8	TMPT-2024-0070	Ajaya Bharti,,Devendra Prasad, Sunil B.D.Y,Kuldeep K. Saxena	MNNIT Allahabad: Motilal Nehru National Institute of Technology Prayagraj, INDIA	Preparation, Characterization, Physical and Compression Testing of Sucrose Based Closed-Cell Aluminium Foam

9	TMPT-2024-0157	Nitin Kotkunde,Suswanth Poluru, Vrishan Ananth, Swadesh Kumar Singh, Ashustosh Panchal, Prabhu Gnanasambandam,	Birla Institute of Technology and Science - Hyderabad Campus Hyderabad, INDIA	Flow Stress Behaviour Prediction of 92W-5Co-3Ni Alloy Using Various Machine Learning Models
10	TMPT-2024-0130	Devendrappa H,Vijaykumar S P, Suresh D S, Sapna Sharanappa, Ganesha H, Abdullah Ba Shbil	Mangalore University India	Aesthetic Synthesis and individuality of Graphitic Carbon Nitride in High Power Density Supercapacitors
11	TMPT-2024-0131	Devendrappa H,Sapna Sharanappa, Suresh D S, Vijaykumar S P, Ganesha H, Abdullah Ba Shbil,	Mangalore University Ringgold ID 29082 India	Synthesis and characterization of tamarind seed husk derived carbon quantum dots incorporated polypyrrole nanosphere composite for energy storage applications
12	TMPT-2024-0135	Didier Talamona,Anel Zhumabekova, Asma Perveen	Nazarbayev University Author Institution is Unverified Nursultan, Kazakhstan Kazakhstan	Mechanical Characterization of Additively Manufactured Ti-6Al-4V Lattice Structures for Biomedical Application
13	TMPT-2024-0125	SANJIB BANERJEE, RAKESH BHADRA, Arpan Kumar Mondal,SANJIB GOGOI, SWRANG MUSHAHARY, Priyam Roy	Tezpur University Department of Mechanical Engineering , TEZPUR, ASSAM India	Processing, Experimental Characterization and Thermal Analysis for Friction Stir Welded Joint of 2219Al Alloy
14	TMPT-2024-0123	Nitin Kotkunde,Sandeep Pandre, Swadesh Kumar Singh, Uma Maheshwera Reddy Paturi	Birla Institute of Technology and Science - Hyderabad Campus Ringgold ID 209298 Hyderabad, INDIA	Hole Flangeability of Dual Phase Steel using Conventional and Two Stage Incremental Forming Processes

15	TMPT-2024-0122	Arnab Chanda,Gurpreet Singh	Indian Institute of Technology Delhi India	Liver Tissue Surrogates: Development and Biomechanical Characterization
16	TMPT-2024-0026R1	Amol Patil,S. H. Sarje	Ajeenkya D Y Patil School of Engineering Pune, Lohegaon, Maharashtra India	Shape Memory and Shape Recovery Characterization of Thermoplastic Urethane
17	TMPT-2024-0050R1	Santosh Kumar Sahu, Ph.D,P.S.Rama Sreekanth, Kuldeep K Saxena, Quanjin Ma	VIT-AP CampusRinggold ID 542655 Guntur, Andhra Pradesh INDIA	Effect of graphene reinforcement on the tensile and flexural properties of thermoplastic polyurethane nanocomposite using experimental and simulation approach
18	TMPT-2024-0074	Santosh Kumar Sahu, Ph.D,Ravi Kumar V,Prakash K R, ,Balasubramanya H S	VIT-AP Campus Guntur, Andhra Pradesh INDIA	Synthesis and Characterization of Carbon Nanofiber-Wrapped PANI and PPy Sensory Films in Polyester Resin for strain sensing
19	TMPT-2024-0088	Bharat Modi ,Ashish Gohil, Kaushik Patel	Nirma University Institute of TechnologyRinggold ID 304898 Ahmedabad, Gujarat India	Ultrasonic vibration-assisted single point incremental forming of hemispherical shaped component using AA3003 material
20	TMPT-2024-0111	Uttam Acharya,Smrity Choudhury, Manisha Roy, Viresh Payak, Peter Omoniyi, Stephen Akinlabi, Esther Akinlabi, Barnik Saha Roy	Ind	Producing Multilayer Laminated Composite of Aluminium/Copper by Friction Stir Additive Manufacturing Process

21	TMPT-2024-0112	Satadru Kashyap, Nilutpal Piku Deka, Krishna Prasad Hazarika, Nabaneet Upadhaya, Ashraf Ali, Sushen Kirtania, Sanjib Banerjee,	Tezpur University Ringgold ID 28688 Napam, Sonitpur District, Assam India	Effect of hybridization on the mechanical and weathering characteristics on jute-arecanut leaf-epoxy composites
22	TMPT-2024-0113	Shafeek M, V N Narayanan Namboothiri, C Raju	Cochin University of Science and Technology School of Engineering Author Institution is Unverified India	Investigation of the fracture behaviour and multi objective optimization of process parameters in multi-point incremental forming of titanium grade 2 sheets
23	TMPT-2024-0115	Dhaval B. Shah, Kautilya Patel, Vivek Mehtani, Shashikant Joshi, Kaushik Patel	Nirma University Institute of Technology Ahmedabad, Gujarat INDIA	Development and investigation of carbon fiber reinforced plastic waste composite using fused filament fabrication
24	TMPT-2024-0134R1	nalin somani, rohit rampal, arminder walia, tarun goyal, nitin gupta	DIT University Ringgold ID 121695 India	Enhancing Precision Machining: Evaluation of Magneto-rheological Abrasive Finishing (MAF) for Brass and SS-304 material
25	TMPT-2024-0136	nalin somani, arminder walia, nitin gupta, anshuman das	DIT University India	Microstructural and mechanical properties of Al-Al ₂ O ₃ micro and nanocomposite fabricated by stir casting
26	TMPT-2024-0142	Sabitha Jannet, Rosari raja, Ijini George, Rajesh S Ruban	Karunya Institute of Technology and Sciences Author Institution is Unverified India	Impact of Boron Nitride (H) reinforcement on the properties of 5.8% Copper-based Aluminum Alloy surface composite done by Friction Stir Processing

27	TMPT-2024-0143	Ashish Khinchi,Pankaj Sharma	Rajasthan Technical University India	Effect of Vibration on Mechanical Characteristics of Bi-directional Functionally Graded Beams under Moisture and Temperature
28	TMPT-2024-0157	Nitin Kotkunde,Suswanth Poluru,Vrishan Ananth,Swadesh Kumar Singh,Ashustosh Panchal, Prabhu Gnanasambandam,	Birla Institute of Technology and Science - Hyderabad Campus Ringgold ID 209298 Hyderabad, INDIA	Flow Stress Behaviour Prediction of 92W-5Co-3Ni Alloy Using Various Machine Learning Models
29	TMPT-2024-0129	Rasaq Kazeem,Tien-Chien Jen,Esther Akinlabi	University of Johannesburg, South Africa South Africa	Experimental Investigation of Machine Vibration Rate and Machine Sound Level in MQL Turning of AISI 1525 Steel Employing Mango Oil as Lubricant
30	TMPT-2024-0072R1	Ajaya Bharti,Hariom Tripathi,Rahul Dev,Akhilesh Kumar Chauhan,Kuldeep Kumar Saxena	MNNIT Allahabad: Motilal Nehru National Institute of Technology Prayagraj, INDIA	Influence of Rotational Speed on the Microstructural, Mechanical and Wear Behaviour of FSPed cast AZ91 Magnesium Alloy

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S.NO	Manuscript Number	Author Names	Affiliation	Paper Title
1	IJDM-D-24-00628R1	ABHAY GUPTA	Alliance University Bengaluru, India INDIA	Nonlinear dynamic response and damping performance of the viscoelastic composite core-based sandwich plates subjected to blast load
2	IJDM-D-24-00611R1	Santosh Kumar Sahu,Varun Krishna V.R.,P.S.Rama Sreekanth,Sidharth Menon,Quanjin Ma,Y P Deepthi	Vellore Institute of Technology - Amaravati Campus: VIT-AP Campus Amaravati, Andhra Pradesh INDIA	Modeling and finite element simulation of sustainable coronary stent with a variation in unit cell design
3	IJDM-D-24-00526R1	Sunil Kumar, Ahijith Kumar PV,,Lokeswar Patnaik,Kiran Bharati, Venkatesh V.S.S.	Amrita Vishwa Vidyapeetham Amrita School of Engineering ChennaiThiruvallur, Tamil Nadu INDIA	Investigating Tool Wear Rate and Surface Quality of Hardened Tool Steel: A Fuzzy-MARCOS Analysis and Response Surface Methodology Study
4	IJDM-D-24-00637	Gianender Kajal, PhD. (P),M.R. Tyagi,Gulshan Kumar,	Manav Rachna University	Finite Element Analysis and Experimental Investigation in Incremental Sheet Metal Forming of Composite Matrix of Grade-V Titanium
5	IJDM-D-24-00588R1	Sarada Prasad Parida, Ph.D, Basana Bidisha Bal,Sarada Prasad Parida,Rajiv Lochan Padhy,Pankaj Charan Jena,	Konark Institute of Science and Technology KHORDHA, ODISHA/INDIA INDIA	Effect of chemical treatment on the thermo-mechanical properties of the natural fiber-reinforced composites
6	IJDM-D-24-00532R1	Lokeswar Patnaik, Sunil Kumar,Abhijit Kumar P V, Kiran Bharati, Saikat Ranjan Maity,Magdalena Łepicka	National Institute of Advanced Manufacturing Technology Ranchi, INDIA	Coating Material Selection for Bulk Metal Forming Dies: A MEREC-integrated Approach with Multiple MCDM Techniques

7	IJDM-D-23-01617R2	Sathish Thanikodi,Jayant Giri,Rathinasamy Saravanan,Balu Palanikumar, Ankit Sharma,Kamaljeet Singh,	Saveetha School of Engineering Chennai, Tamil Nadu INDIA	E-Waste Nano filler fused Natural Fibre Polymer Nano composite
8	IJDM-D-24-00580R2	Satyanarayana Kosaraju	GRIET	TAGUCHI OPTIMIZATION STUDY ON FRICTION STIR WELD PARAMETERS FOR ENHANCING DISSIMILAR JOINT STRENGTH OF AA8011 AND AA5052
9	IJDM-D-24-00620R1	MAHRURI ARIF WICAKSONO, Bambang Suharno, Widi Astuti,Slamet Sumardi,Yayat Iman Supriyatna,Ika Maria Ulfah, Irza Sukmana,Sugiyanto Sugiyanto,	Universitas Indonesia	Biodegradable Innovation: Investigating Static Structural Properties of AZ31B Magnesium Based On Experimental and Finite Element Analysis
10	IJDM-D-24-00547R1	Sarada Prasad Parida,Abhijit Mohanty,Sarada Prasad Parida,Ratiranjan Dash	Konark Institute of Science and Technology KHORDHA, ODISHA/INDIA INDIA	Modal response of sandwich plate having carbon-epoxy faceplate with different honeycomb core material and geometry considerations
11	IJDM-D-24-00521R1	Vishal Bhise,Bhagwan F. Jogi,	Dr Babasaheb Ambedkar Technological UniversityRinggold ID 232470 INDIA	Multi-Response Optimization and Effect of Process Parameters during Machining of Inconel X-750 using Grey Relational Analysis and Analysis of Variance
12	IJDM-D-24-00516R1	VIVEK S AYAR ,Himanshu Khandelwal,Sambit Kumar Parida,Maulik. J. Shah, Akash V. Vyas,Ravi P. Barot,Mayurkumar P. Sutaria	National Institute of Advanced Manufacturing Technology INDIA	Design and Development of IoT Enabled Modular Melting, Pouring, and, Stirring System for Casting of Non-Ferrous Alloys and sustainable Aluminum Matrix Composites (AMCs)
13	IJDM-D-24-00652R1	KAUSHIK KUMAR ,Jeenendra Kumar Shiv, Chikesh Ranjan,	Birla Institute of Technology Ranchi, Jharkhand INDIA	Flight of Inspiration: Mimicking Nature's Mastery in Micro Air Vehicle Design

14	IJDM-D-24-00615R1	Anand Mohan Murmu,Sambit Kumar Parida,Hari Vemireddy,Vivek S Ayar,Ratnakar Das	National Institute of Foundry and Forge Technology: National Institute of Advanced Manufacturing Technology Ranchi, Jharkhand INDIA	Effect of functional grading on adhesion failure propagation in adhesive bonded single lap joint with curved adherends
15	IJDM-D-24-00543R1	Imhade Princess Okokpujie,Lagouge K. Tartibu,Sylvia E. Kelechi,Rasaq A. Kazeem,Esther T. Akinlabi	Afe Babalola University NIGERIA	Interaction and Optimization Study of the Influence of Calcium-Carbide-Waste, Crumb Rubber, and Fly-Ash on the Mechanical Properties of a Developed Self-Compacting-Rubberized Concrete for Sustainable Manufacturing Processes
16	IJDM-D-24-00800	Dhaval B Shah, Devwrat Upadhyay, Viraj Mujadia, Rushil Daruwala, Absar Lakdawala	Nirma University Institute of Technology Ringgold ID 304898 Ahmedabad, Gujarat INDIA	Investigation on performance of composite phase change material based thermal management of electrical battery
17	IJDM-D-24-00744	Peter Omoniyi, Kobe Hassan Ibrahim, Mathew Sunday Abolarin, Asipita Salawu Abdulrahman, Rasheedat Modupe Mahamood, Tien-Chien Jen, Esther Akinlabi	University of Johannesburg Johannesburg, Gauteng SOUTH AFRICA	Structural Simulation of Ti-Ha-CaCO ₃ Biocomposites using Finite Element Analysis (FEA) for Biomechanical Stability of Hip Implant
18	IJDM-D-24-00627	ANSHUMAN KUMAR, TEJAVATH Gopi	griet	A Hybrid Multi-Optimization cutting rate and surface roughness using PCA-based Improved-GWO in Precise CNC turning of AA2014
19	IJDM-D-24-00624	Krishna Kumar TS, Kaviti Ajay Kumar,	M.E, VNR Vignana Jyothi College of Engineering and Technology	An advanced study on the application of artificial neural networks in the abrasive waterjet machining of titanium nanocomposites.
20	IJDM-D-24-00626	Prince Jeya Lal LAZAR, Bakkiyaraj M, Elango Natarajan, Wei Hong Lim, Jeyanthi S, Vinoth Kumar S, Ramesh S	Rajalakshmi Institute of Technology Chennai, INDIA	Application of metaheuristics to evaluate energy absorption and damage tolerance in GFRP-Epoxy nanocomposite laminates

21	IJDM-D-24-00590	Din Bandhu ,Kushal Patel,Dhruv Chauhan, Priyanka Mishra,Jagat Jyoti Rath,Kuldeep K Saxena,K. S. Rajendra Prasad,	Manipal Academy of Higher Education Bengaluru, Karnataka INDIA	Design and Development of a Modular Hydroponic Tower with Topology Optimization
22	IJDM-D-24-00582	SANJIB BANERJEE, Rakesh Bhadra,Arpan Kumar Mondal, Sushen Kirtania,Satadru Kashyap,Sanjib Gogoi, Swrang Mushahary,Priyam Roy	Tezpur University School of Engineering Tezpur, Assam INDIA	Numerical Modeling of Dynamic Heat Flow Behaviour during Friction Stir Welding of Al-Cu Alloy
23	IJDM-D-24-00519R1	Sanjiv Kumar Tiwari, Anshu Anand,Ved Prakash,,Ritesh Kumar Singh,Kaushik Kumar,	Birla Institute of Technology INDIA	Optimizing Stir Casting Parameters for Aluminum Metal Matrix Composite Fabrication: A Hybrid Approach
24	IJDM-D-24-00824	Desmond Edem Primus Klenam	University of the Witwatersrand Johannesburg SOUTH AFRICA	Towards Optimal Hot Deformation of AISI 4340 Steel: A Dynamic Material Modeling Perspective
25	IJDM-D-24-00788	Santosh Kumar Sahu, Ph.D	Vellore Institute of Technology - Amaravati Campus: VIT-AP CampusRinggold ID 542655 Amaravati, Andhra Pradesh INDIA	AI-Based Machine Learning Prediction of Electroless Copper Coating on Graphite Powder for Green Composite Fabrication
26	IJDM-D-24-00798	Piyush P Gohil, Ph.D.	MS University of Baroda Faculty of Technology and Engineering: The Maharaja Sayajirao University of Baroda Faculty of Technology and Engineering	Experimental Investigations on High speed drilling of uni directional GFRP composites (HSD- UDGFRC)
27	IJDM-D-24-00778	Ashok Pandarinath Tadamalle, Ph. D.	Sinhgad Institutes' Sinhgad College of Pune, Maharashtra INDIA	Selection, Optimization and Analysis of Core and Face Material for Wind Turbine Composite Blade
28	IJDM-D-24-00780	Ratnakar Das, Ph.D.	National Institute of Advanced Manufacturing TechnologyRanchi, Jharkhand INDIA	A Study on Drilling Performance of Fabricated Sabai Fiber (Eulaliopsis binata) /Epoxy Composite

29		Vishwanath Kumar Panangipalli,Saraswathi Hallika Pindiprolu,Jitendra Singh	Anurag University	Advancements in Lightweight Two-Wheeler Rim Design: A Finite Element Analysis Approach with Diverse Materials
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S.NO	Manuscript Number	Author Names	Affiliation	Paper Title
1	124	D. Indira 1, a) Vanisree Sah 2, b) P.Tanvi 3, c) P.Sai Deepika 3, d) P.Anvith Reddy 3, e)	Department of Management, GRIET, Hyderabad- 500090	A Study on the Importance of Mutual Funds as an Investment Tool
2	159	Job Wambua1, Fredrick Mwema1,2 , Stephen Akinlabi1, Tien-Chien Jen2, and Esther Akinlabi1	Department of Mechanical & Construction Engineering, Northumbria University, NE1 8ST Newcastle, United Kingdom	Influence of Infill Pattern and Layer Height on Additively Manufactured 17-4 PH/PLA Composite
3	172	Sirisha Bandi1,2* , Phani Raja Kanuparth2* , Venkata Nagendra Kumar Putta2, Kusuma Ashok Kumar1 , Saroja Rani Bhupatiraju3	Department of Chemistry, B V Raju Institute of Technology, Narsapur,502313, Telangana, India.	Sustainable Solid-State Method of Synthesis, Characterisation, and Photoluminescence Studies of Yb3+/Ho3+ Doped YPO4 Nanomaterials
4	209	Shiv Sankar Das1, Debashree Debadatta Behera2, Ramesh Chandra Mohanty2, Bijaya Bijeta Nayak3, Pramod Kumar Patjoshi4, Anita Patra5 and Adarsh Rath6	School of Management, Centurion University of Technology and Management, Bhubaneswar, Odisha, India	Empowering Rural South Odisha: A Clean Energy Entrepreneurship Approach for Sustainable Development
5	220	D. Shiva1, K. Chaitanya Sai1* , L. Sai Charan1, S.Aparna1, Anshuman Kumar1, D.S.Naga Malleswara Rao2, Ram Subbiah1	Mechanical Engineering Department, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana	Investigation on Mechanical Properties of Fiber Glass Reinforced Composite with Polyester Resin for sustainable applications

6	226	G J. Saikishore1*, K. Giridhar Saikiran1, V. Chakri1, Anshuman Kumar1, D.S.Naga Malleswara Rao2 , G.Saravanan3, Ram.Subbiah1	Mechanical Engineering Department, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad	Investigation of Mechanical Properties and Thermal Properties on Sugarcane Fiber composite Material Reinforced with Polyethylene Terephthalate Matrix Material for sustainable applications
7	229	P.Ravi Kumar1, N.Senthil Kannan2, J.Dinesh Kumar3, P.Sai Pradeep4*, M.Iyyappan5, K.K.Arun6, Ram subbiah4	Mechanical Engineering Department, CVR college of Engineering, Hyderabad, Telangana	Evaluation Of Wear Behavior On Aisi 431 By Vaccum Annealing Method For Sustainable Applications
8	231	S.N.S. Santhosh Kumar1, J.Venkatesh2, V.Rahul3, J.Gowthaman4, DVSSSV.Prasad5, V.R. Navaneeth6, Ram Subbiah7*	Mechanical Engineering Department, Hyderabad Institute of Technology and Management, Hyderabad, Telangana	Kinetics of Stainless Steel Material by Plasma nitriding Process for sustainable applications
9	237	S.N.S. Santhosh Kumar1, R.Vinoth2, Rajesh Kumar3, M.Jeevan Kumar3, DVSSSV. Prasad4, S. Prabhu5, Ram Subbiah6	Mechanical Engineering Department, Hyderabad Institute of Technology and Management, Hyderabad, Telangana	Investigation of Tempered AISI 420 SS under dry slided conditions for sustainable applications
10	241	S.Sathish1*, Bala Murali Nagarajan2, Rajesh Kumar3, J.Yasin4, A.Daniel Das5, B.Seema6, Ram Subbiah7	1Mechanical Engineering Department, Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu	Wear Assessment on AISI 410 Steel by Tempering Process for Constant Load and Speed Sustainable Applications
11	249	S.Sathish1, T.Beena2, V.Rahul3*, M.Saravana Kumar4, A.Daniel Das5, B.Seema6, Ram Subbiah7	Mechanical Engineering Department, Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu	Assessment of Wear Behavior Analysis on Normalized Martensitic Stainless Steel for sustainable applications
12	301	Nookaraju B Ch1, Dhanuri Bharath Yadav2, Kotholla Raghavendar3, Puneeth Varma4,	Department of Mechanical Engineering , GRIET, Bachupally, Hyderabad, Telangana - 500 090	Experimental and Numerical Investigation of Heat Transfer Using Twisted Tapes with Rectangular Cuts
13	320	Sajid Hameed Siddiqui1, Ramesh Chandra Nayak2*,a,Huzaifa Fidvi3, N. H. Khan4, Mahesh Vasant Rao Kulkarni5, Pratik C. Ghutke6, Manmatha Ku. Roul7	Department of Mechanical Engineering, Synergy Institute of Technology, Bhubaneswar-752101, Odisha, India.	Thermoplastic polymer track with gearing mechanism to harvest green energy for sustainable development

14	330	Sirisha Bandi ^{1,2,a*} , Venkata Nagendra Kumar Putta ^{2,b*} , Phani Raja Kanuparth ^{2,c} , Kusuma Ashok Kumar ^{1,d} , Saroja Rani Bhupatiraju ^{3,4,e} , K.Tharini ^{4,f}	B V Raju Institute of Technology, Narsapur, Telangana, India.	Solid-State Method of Synthesis, Characterisation, and Photoluminescence Studies of Yb ³⁺ /Ho ³⁺ Doped YPO ₄ Nanomaterials
15	336	Shraddha Agrawal ¹ , Sanjiv Kumar Tiwari ¹ , Ritesh Kumar Singh ¹ , Kaushik Kumar ^{2*}	Birla Institute of Technology, Mesra, Ranchi.	The Impact of Blockchain Technology on Supply Chain Efficiency: A Review
16	370	P.Ravi Kumara,, G.Shashank Reddy ^b , P.Rohith ^c , S.Sai Karthik ^d	Sr. Asst. Prof., Department of Mechanical Engineering, CVR College of Engineering, Hyderabad, India, 501510.	Synthesis and Effect of Epoxy in Lamination for Kevlar/E-Glass Hybrid Composites
17	373	D. Dev Singh ^{1,a*} , Suresh Arjula ^{2,b} , A. Raji Reddy ^{3,c}	Department of Mechanical Engineering, Jawaharlal Nehru Technological University Hyderabad 500085, India	Influence of Laser Power on Mechanical Properties of FGM of SS316L and IN625 Fabricated by Direct Metal Deposition
18	379	Kiran Kumar Namala	Mechanical Engineering Department, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India	Identification of weld sub-surface defects by radiographic images using texture features
19	383	Amit Kumar Rana ¹ , Sanjib Kundu ² , Sourav Kayal ²	Department of Mechanical Engineering, The ICFAI University Tripura, Agartala, India	Digital fabrication with FDM 3D printing on prototype development of toys: additive manufacturing and sustainability
20	395	G Srinivasa Gupta ¹ , CH Prithvi ² , S Jayanth Chowdary ³ ,	1Faculty of Mechanical Engineering, VNR Vignana Jyothyi Institute of Engineering and Technology, Hyderabad, 500090, India.	Design and Analysis of Leight Weight Swing Arm using Generative Design Concept
21	400	a Pranav Mehrotra, b Keshav Dahiya, c Pradeep Khanna	Department of Mechanical Engineering, Netaji Subhas University of Technology, Delhi	Mathematical Modelling to Predict Bead Geometry Parameters of MIG Welded Aluminum 6063 Plates
22	401	Poodipeddi Anusha ¹ , Tayi Srikanth ² , Manne Nirmal Devi Kiran ³ , Palivela Rambabu ⁴	1,2,3,4Mechanical Department, Ideal Institute of Technology, Kakinada, Andhra Pradesh, 533005, India.	Fabrication and Simulation of an E-Vehicle

23	521	Shraddha Agrawal1, Sanjiv Kumar Tiwari1, Ritesh Kumar Singh1, Kaushik Kumar2*	Department of Production and Industrial Engineering, Birla Institute of Technology, Mesra, Ranchi.	The Impact of Blockchain Technology on Supply Chain Efficiency: A Review
24	526	M.Selvakumar1, S.Geetha*1 , Janahar C 2 ,Lakshmi Krishnan S2 , , Rohith Kumar R2	Professor, Rajalakshmi Engineering College, Chennai, 602105 India	Optimizing Mix Proportion of Geopolymer Concrete with Steel Sludge - A Sustainable Approach
25	529	Vishwanath Kumar Panangipalli1*, Mani Saraswathi Hallika Pindiprolu2, Divya Maharana1, Kartheek VSD Chivukula1, Naveen Ghanapuram1	Department of Mechanical Engineering, Anurag University, Hyderabad, Telangana 500088, India	Performance of Single Slope Solar Stills: A Comparative Study of Conventional and Modified Stills with Nanofluid and Reflectors
26	539	Thulasi Sankar 1*, Vinayagam Mohanavel 2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073	A Review on Machining characteristics of Magnesium Alloy and Micro/Nano Particles Reinforcements for Sustainable approach in Composites
27	545	Thulasi Sankar 1*, Vinayagam Mohanavel 2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu	Enriching Tensile Strength of AZ61 Composites Incorporated with Si3N4 by Liquid State Casting Parameter Optimization Employing Taguchi Technique
28	554	Thulasi Sankar 1*, Vinayagam Mohanavel 2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073,	Exploring the Mechanical Properties of Si3N4 Reinforced AZ61 Magnesium Composites prepared by Stir Casting Route for Sustainable Transportation applications
29	558	Yeole Shivraj Narayan1*, Kode Jaya Prakash1, Pothula Narendra1, S. Anand Kumar1, Kapish Barik1	Department of Mechanical Engineering, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad, INDIA.	COMPRESSIVE STRENGTH ASSESSMENT IN ADDITIVELY MANUFACTURED SUSTAINABLE POLY LACTIC ACID SPECIMENS AS PER ASTM D695 STANDARD
30	563	Matta Uday Kirana, Ajay Kumar Kavitia,b	Department of Mechanical Engineering, VNRVJIET, Hyderabad, India	NON-CONTACT STRUCTURE SOLAR DESALINATION SYSTEM FOR HIGHER DEPTHS

31	566	Kuwar Mausam	Department of Mechanical Engineering, Indian Institute of Technology (ISM), Dhanbad	Exploring the Use of Hybrid Nanofluid in Flat Plate Collector for Sustainable Energy Harvesting: An Experimental Investigation
32	571	Sivanagaraju Dusanapudi1a, R L Krupakaranb, Anshuman Kumara, K Sai venkat, Akash, Shanmukh	Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana	Investigation & Optimization of WEDM Process Parameters using Inconel 690
33	575	Kedar Badheka*, Daulat Kumar Sharma, Vishvesh Badheka	Assistant Professor, Mechanical Engineering Department, Gujarat Power Engineering & Research Institute, Gujarat, India	Wear behavior of Al- Steel solid state coating produced by Friction surfacing
34	582	Senthil Rajasekaran1* , Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai, Indi	Enhancing Drilling Performance of AA2017 /AlN Composites through Multi-Objective Optimization using Grey Relational Analysis
35	587	Senthil Rajasekaran1* , Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai, India	Effects of Stir Casting Process Parameters on Tensile Strength of AA2017-AlNp Composites using Taguchi Technique
36	607	Senthil Rajasekaran1* , Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai,	Sustainable Optimization of Drilling Parameters for AA2017/AlN Composite Materials: A Grey Relational Analysis Approach
37	612	G. Sheelam Balavardhan Reddya, Singam Kumaraswamy, Aligi Paulsona, P.Saipradeepa, Anshuman Kumara, Ram Subbiaha	Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana	Machining Performance Optimization of FSW Using ANN-based PCA - A Hybrid approach for AA6061
38	617	Senthil Rajasekaran1* , Vinayagam Mohanavel2	1Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Chennai, India	Sustainable Improvements in Mechanical and Tribological Properties of AA2017-Aluminum Nitride Composites: A Comprehensive Investigation and Numerical Analysis

39	620	Methari Praveena, Goli Kaushik Chandraa, Kattegommula Vamshidhar Reddy, Anshuman Kumara*, D S Nagarajua and Ram Subbiaha	Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana.	Predict the machining performance of FSW of dissimilar material of Al5052 and AZ31 using Multi-Objective Dragonfly Algorithm
40	628	Sandeep D1, Lakshmana Vidhey P1, Sujith Kumar T1, Sravan Shashank S ²	UG Student, Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana 500090, India	Modeling and simulation of welded joints of SS304H & P91 Steels: A Review
41	635	Soni Kumari1*, Prachi Vishwakarma1, Kumar Abhishek2	Department of Mechanical Engineering, GLA University, Mathura, India	Advancements in 3D Printing Materials for Diverse Industries: A Review and Future Prospects
42	648	M.Mamatha Gandhi1*, Ram Subbiah 2,3, Tejsingh Chouhan4	1Research scholar, Mechanical Engineering, Singhania University, Rajasthan	Liquid Nitriding Process on AISI 304SS under Dry Sliding Conditions for Sustainable Applications
43	660	K. Ramyasree1*, Ram Subbiah 2,3, Tejsingh Chouhan4	1Research scholar, Mechanical Engineering, Singhania University, Rajasthan	Investigation on AISI 253 Stainless Steel by Gas Nitriding Process for Sustainable Applications
44	669	Pandian Rajendiran 1*, VinayagamMohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu, India	Exploring the Properties and Production Techniques of Magnesium Matrix Composites – An Sustainable approach
45	678	Pandian Rajendiran 1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu, India	Optimization of process parameters on Tribological characteristics of AZ61-ZrC composites via Taguchi technique for sustainable automotive applications
46	688	Pandian Rajendiran 1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu, India	Optimization of input parameters on WEDM of AZ61-15wt.% ZrC composites via Taguchi technique for sustainability in transportation sectors.
47	692	Mukul Sharma1, Yash Purohit1, Dhruv Deshwal1, Ayush Owhal1,2, Ajay D. Pingale3,* and Sachin U. Belgamwar1	Department of Mechanical Engineering, Birla Institute of Technology and Science, Pilani 333031, Rajasthan, India	Sustainability in Magnetic Metal-Carbon Nanocomposites: A Comprehensive Review of Manufacturing, Characterization, and Applications

48	698	K. Chaitanya Sai1*, D. Shiva1, V.G. Prasanna Kumar Reddy1, K. Pratham Rao1, M. Adithya1, S. Aparna1, Ram. Subbiah	Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana	Investigation of Mechanical Properties on Carbon Fiber Reinforced Composite with Polyester Resin for sustainable applications
49	705	Bondu jyothi ¹ , Tayi Srikanth ² , S. V.S.S.R. Krishna P ³ , Raju Chittumuri ⁴	Mechanical Department, Ideal Institute of Technology, Kakinada, Andhra Pradesh, 533005, India	Performance Analysis and Effect of various Material Fin-Perforations in a Plate-Finned Heat Exchanger
50	725	S. Rajkumar1*, Arul Kulandaivel2, M. Subburaj3, S. Ravi4, Sathish Kannan5, 6, Ram Subbiah7, S. Kaliappan8	1Department of Mechanical Engineering, Faculty of Manufacturing, Institute of Technology, Hawassa University, Ethiopia	Investigations on microstructure, hardness, surface roughness and corrosion behaviour of plasma sprayed AlTi coating on Cast Iron for sustainable applications
51	731	M. Subburaj1, S. Ravi2, Ishwarya Mayiladuthurai Vaidyanathan3, S. Kaliappan4, Sathish Kannan5,6, S. Rajkumar7, M. Meignanamoorthy8*, Ram Subbiah9	1Department of Mechanical Engineering, Shadan College of Engineering and Technology (an Autonomous Institution), Hyderabad Telangana State, India	Investigations on microstructure, physical properties and corrosion behaviour of A356-Al ₂ O ₃ -B ₄ C composites for sustainable applications
52	736	Ram Subbiah1, Arul Kulandaivel2, S. Ravi3*, D. Yamuna4, M. Subburaj5, S. S. Rajkumar6, Manzoore Elahi M. Soudagar7,8	1Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Nizampet, Hyderabad – 500090, India	Investigation on the impact of Humidity on Mechanical Performance of Aramid Fiber Reinforced Epoxy Composites for Sustainable Applications
53	745	Arul Kulandaivel1*, S. Rajkumar2, S. Ravi3, M. Raja4, M. Subburaj5, Sathish Kannan6,7, Ram Subbiah8	1Department of Mechanical Engineering, Agni College of Technology, Chennai-600130, Tamil Nadu, India.	Advancements in Tribological Performance: B ₄ Cp/TiO ₂ Ceramic Matrix Composites Fabricated by DIMOX for High-Temperature sustainable Applications
54	749	Seema.B1, 2*, L. Girisha3, Ram. Subbiah4, Jeevan.T. P5, Banu Seema6	1Research Scholar, Department of Mechanical Engineering, PES Institute of Engineering and Technology, Shivamogga, Karnataka	Recent Reviews on Hybrid Nano Reinforcements for Improving Mechanical Properties of Polymers for sustainable applications
55	756	S. Ravi1, M. Subburaj2, Murugan Perumal3*, Manzoore Elahi M. Soudagar4, Ram Subbiah5, Sathish Kannan6,7, S. Rajkumar8	Department of Mechanical Engineering, Chennai Institute of Technology, Chennai, Tamilnadu, India	Enhancing AA6061 Metal Matrix Composites with Oxidized and Unoxidized TiC Particles for sustainable applications: Effects on Thermal Expansion and Structural Integrity

56	772	Kalol Bera, Suchismita Satapathy	School of Mechanical Engineering ,KIIT Deemed to be University, Bhubaneswar,Odisha,India	SUSTAINABLE MATERIAL FOR KNEE REPLACEMENT USING TOPSIS METHOD
57	782	M.Venkata Ramana 1,a*, Jalumedi Babu 2,b, Harshith Renukuntla 1,c , Harshith Reddy Kothi 1,d	Department of Mechanical Engineering, CVR College of Engineering, Ibrahimpatnam, Hyderabad 501510, Telangana, India	Comparison of Effect of Ferritic Nitrocarburising on En-19,En-24 and En-37 Steels
58	805	Omolayo M. Ikumapayi1,3, Opeyeolu T. Laseinde2, Esther T. Akinlabi3,4	Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado Ekiti, 360101, Nigeria	Roles of IoT, Big Data Analytics, and Cyber-Physical Systems in a Sustainable Manufacturing
59	820	Omolayo M. Ikumapayi1,3, Opeyeolu T. Laseinde2, Esther T. Akinlabi3,4	Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado Ekiti, 360101, Nigeria	An overview of sustainable greywater treatment processes
60	826	Parminder Singh 1,a, D. R. Prajapati 1,b, Shankar Sehgal2,c*	Mechanical Engineering Department, PEC (Deemed to be University), Chandigarh, 160012, India	Microwave Joining Of SAF 2507 And Optimization Of Elemental Constitution Using Design Of Experiments
61	830	G. Srinivasagupta1, a *, *G.Sasikumar2,b and Venkata Padmavathi S3,c , Bhaskara Rao Lokavarapu4,d	Professor, Faculty of Mechanical Engineering, VNR Vignana Jyothyi Institute of Engineering and Technology, Hyderabad, 500090, India	Experimental Analysis on Effective Electro Magnetic Braking System
62	852	M. Tukaram bai1* , P. Venkateswrlu2	Associate Professor, Department of Chemical Engineering, Andhra University	Biosorption of nickel by ground fallen waste coffee plant leaves powder: Equilibrium, kinetics, Thermodynamics and Optimization (RSM)
63	857	Soumya Ranjan Samantaray, Sudhansu Ranjan Das*, Debabrata Dhupal	Department of Production Engineering, Veer Surendra Sai University of Technology, Burla 768018, Odisha, India	Material removal rate in AJM of zirconia ceramic using silicon carbide abrasive: Investigation, modelling, and optimization

64	862	Manavalan Shanmugam1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu, India	Overview of Mechanical and Wear Properties of Reinforced AA5083 Aluminum Metal Matrix Composites
65	869	Manavalan Shanmugam1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073,	Mechanical Properties Investigation of an Aluminum nitride Reinforced AA5083 Hybrid Metal Matrix Composite Fabricated by Stir Casting and Heat Treatment
66	879	Manavalan Shanmugam1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073,	Optimization of Mechanical Behavior of AA 5083/AlN Composite Fabricated by Stir Casting Using Taguchi Grey Relational Analysis
67	909	Vanya Arun1*, E Krishna Rao Patro2, V.S Anusuya Devi3, Amandeep Nagpal4, Pradeep Kumar Chandra5, Ali Albawi6	1Department of Electronics and Communication Engineering, IILM University, Greater Noida, Uttar Pradesh, India.	AI Based Prediction Algorithms for Enhancing the Waste Management System: A Comparative Analysis
68	914	Ankita Awasthi1*, Ali Abdulhussein Hameed2, Ravi Kalra3, Priyameet Kaur Keer4, Ginni Nijhawan5, K Mayuri6	Department of Mechanical and Allied Engineering, IILM University, Greater Noida, Uttar Pradesh, India.	Detailed Analysis of Wind as an Energy Source for Achieving Sustainable Energy Generation
69	922	Ankita Awasthi1*, M Geeta Yadav2, Swathi Baswaraju3, Ginni Nijhawan4, Sajjad Ziara5, Ashwani Kumar6	1Department of Mechanical and Allied Engineering, IILM University, Greater Noida, Uttar Pradesh, India.	Detailed analysis of Sustainable Infrastructure Design and Benefits for urban Cities
70	932	Ravi Shankar Raman1*, Gopu Srilekha2, Santosh Kumar B3, Navdeep Singh4, Pradeep Kumar Chandra5, Ahmed sabah Abed AL-Zahra Jabbar6	Department of Mechanical Engineering, ABES Engineering College, Ghaziabad-201009, UP, India.	Enhancing Cucumber Production Sustainability by Incorporated Pest Management: A Comparative Evaluation of Cost and Profitability
71	936	Alok Bhadauria1*, D Rajani 2, Vijilius Helena Raj3, Karabi Kalita Das,4, Amit Dutt5, Sajjad Ziara6	Department of Mechanical and Industrial Engineering, Manipal Institute of Technology Bengaluru, Manipal Academy of Higher Education, Manipal 576104, Karnataka, India	A Comprehensive Analysis of the Problems in Sustainable Construction and Mitigation Strategies

72	942	N Rajashekar1,*, Din Bandhu 2, Aravinda K3, Manoj Kumar Vishkarma4, Atul Singla5, Sajjad Ziara6	Department of Computer Science and Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India.	Evaluation of Green Energy Impacts for Achieving Global Economic and Environmental Sustainability
73	949	Din Bandhu1,*, E Umashankari 2, Revathi V 3, Amit Dutt 4, Pramod Kumar 5, Tamam Ali Abd Ulabbas Abedi6	Department of Mechanical and Industrial Engineering, Manipal Institute of Technology Bengaluru, Manipal Academy of Higher Education, Manipal 576104, Karnataka, India.	A Detailed Review on Sustainable Engineering Methods Integrated with Waste Management Practices
74	953	Abhishek Saxena1*, Kilaru Aswini2, B. Rajalakshmi3, Navdeep Singh4, Irfan Khan5, Ahmed sabah Abed AL-Zahra Jabbar6	Department of Mechanical Engineering, ABES Engineering College, Ghaziabad-201009, UP, India.	Species Sensitivity Distributions: Understanding Ocean Acidification's Impact on Marine Biota
75	956	Abhishek Saxena1*, R J Anandhi2, K Rashmi3, Navdeep Singh4, Dinesh Kumar Yadav5, Rahman S. Zabibah6	Department of Mechanical Engineering, ABES Engineering College, Ghaziabad-201009, UP, India.	Biomedical Materials for Sustainable Wound Care: A Review of Environmental Impact and Clinical Efficacy
76	959	Kapavarapu Sreekar 1, Beeram Sri Mahi Saroj Prathap2, Yagna Sri Thikkada3, Kethineedi Vyshnavi4, Pichika Satya Kedarnath5, and Meena Vangalapati6*	Btech Student, Department of Chemical Engineering, AUCE, Andhra University, AP, INDIA	Sustainable Removal of Crystal Violet Dye Using Synthesized Albizia Procera-Iron Activated Carbon Nanoparticles (AP-Fe-Ac Nps) : Kinetics, Isotherms and Thermodynamics
77	963	Kiranmayee. G1, Dasari Dedeepya2, Aluri Satya Pavani Asritha3, Paluru Sri Lakshmi Sowmya4, Shanti Silvia Pothuraju5, Meena Vangalapati6*	Department of Genetic Engineering, SRM Institute of Science and Technology, Kattankulathur, Chennai, Tamil Nadu 603203, India	sustainability in Atrazine Herbicide Biodegradation by Pseudomonas putida MTCC 2252
78	969	Satti Amrutha1, Nilikonda Dinesh2, Yarlagadda Madhuri3, Gade Naveen Reddy4, Venkata Rao Poiba5, and Meena Vangalapati 6*	B.Tech Student, Department of Chemical Engineering, AUCE, Andhra University, AP, INDIA	Sustainable synthesis of eucalyptus globulus – titanium-magnesium nano composite ('EuTiMg NC') for the photocatalytic degradation of methylene blue

79	975	Jayanth . Telagareddi1, Sai Kiran Rajana2, Finny John Nethala3, Appala Naidu Pamu4, and Meena Vangalapati5*	MTech Student, Department of Chemical Engineering, AUCE, Andhra University, AP, India.	Sustainability of Electrocoagulation Process in the Removal of Dicofol Pesticide using Aluminium Electrodes
80	980	Kaza Kusuma Jayasree Komali1, Lingam Anjali2 , Balam Krishna Sri Pragnya3, Satti Amrutha4 , and Meena Vangalapati*5	B.Tech Biotechnology, Department of Chemical Engineering, Andhra University College of Engineering, Visakhapatnam, Andhra Pradesh	Synthesis, Characterization and Sustainability by Utilisation of Psidium Guajava-Iron Nano Particles (PG-FeNPs) for the removal of Methylene blue Dye
81	982	Kuraku Ratna Babu1 , sattenapelli prashanth1 , Kethe Ganesh1 , Gone kiran kumar1	Department Of Mechanical Engineering, Gokaraju Rangaraju Institute Of Engineering And Technology, Hyderabad 500090, India	Experimental Material Characterization And Formability studies on Aluminium Alloy (AA 8011)
82	995	Viswanadhapalli Balaji1, Elavala NagaSai Reddy1, Makam Adithya1, Mallu Venkata Ganga Prasanna Kumar Reddy1, Nagaraju Krishna Chythanya2	Department of Mechanical Engineering, GRIET, Bachupally, Hyderabad, Telangana - 500090	Experimental Study and Neural Network Model to Predict Formability of Magnesium Alloy AZ31B
83	1012	Sarvadey Ashwin Kumar1, Sricharan Chaganty1, Varunn Rajesh1 , K Sunil Kumar Reddy2	Under Graduate Student, Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana.	REVIEW ON DEVELOPMENT, NANOPARTICLE REINFORCEMENT AND SUSTAINABLE MATERIALS FOR ENHANCEMENT OF MECHANICAL PROPERTIES IN ALUMINIUM HYBRID METAL MATRIX COMPOSITES
84	1020	Arpna Chaudhary 1, Dr. Gurmeet Kaur 2	Department of Chemistry, UIS, Chandigarh University, Mohali, Punjab	Sustainability in anticancer drugs development
85	1053	Diksha1 and Gurmeet, Kaur1	Department of Chemistry, UIS, Chandigarh University, Mohali, Punjab, India	Sustainable deployment of host defense peptides for targeted quorum sensing inhibition
86	1059	Srinivasan Suresh Kumar1*, Vinayagam Mohanavel2	Research Scholar, Department of Mechanical Engineering, Bharath Institute of Higher Education and Research, Tambaram, Selaiyur, Chennai 600073, Tamilnadu	Characterization of ZK60/ZrB2 Composites Synthesized by Liquid Metallurgy Route as Alternate Materials

87	1063	Vanya Arun1*, Jayasheel Kumar Kalagatoori Archakam2, C Praveen Kumar3, Amandeep Nagpal4, Pradeep Kumar Chandra5, Tamam Ali Abd Ulabbas Abedi6	1Department of Electronics & Communication Engineering, IILM University, Greater Noida, Uttar Pradesh, India.	Examining the Relationship between Biotech Crop Cultivation and Global Food Security Sustainable Index: A Comparative Analysis from 2012 to 2018
88	1072	*1,2Kazeem, Rasaq Adebayo, 1Jen, Tien-Chien and 3Akinlabi, Esther Titilayo	Department of Mechanical Engineering Science, University of Johannesburg, Auckland Park, Johannesburg, 2006, South Africa.	Influence of Mango Seed Oil on Surface Roughness and Cutting Temperature During Sustainable Turning of AISI 1525 Steel Under Minimum Quantity Lubrication Environment
89	1089	Alok Bhadauria1,*, M Siva Swetha Reddy2, V. Asha3, Ginni Nijhawan4, Ali Abdulhussein Hameed5, Bhishm Pratap6	1Department of Mechanical and Industrial Engineering, Manipal Institute of Technology Bengaluru, Manipal Academy of Higher Education, Manipal 576104, Karnataka, India.	Analytical Survey on the Sustainable Advancements in Water and Hydrology Resources with AI Implications for a Resilient Future
90	1095	Ravi Shankar Raman1*, Rakesh Chandrashekar2, Ch. Srividhya3, Amandeep Nagpal4, Ali Abdulhussein Hameed5, Praveen6	1Department of Mechanical Engineering, ABES Engineering College, Ghaziabad-201009, UP, India	From Forests to Oceans: Exploring the Interconnected Influences of Climate Change on Ecosystems, Communities, and the Path to Sustainability
91	1102	Imhade P. Okokpujie 1,2*, L. K. Tartibu 1, Rasaq A. Kazeem 3,4, Esther T. Akinlabi5	1Department of Mechanical and Industrial Engineering Technology University of Johannesburg Doornfontein Campus Johannesburg, South Africa	Investigating the Effect of Hot and Cold Working on the Mechanical and Microstructural Properties of Low-Carbon-Steel for Sustainable Manufacturing
92	1106	Shweta1, Gurmeet Kaur1*,	Department of Chemistry, Chandigarh University, Gharuan, Punjab-140413, India	A sustainable synthesis, characterization of modified waste onion peels and its exploration in various applications
93	1112	NIVEDITA,† GURMEET KAUR,*	Department of Chemistry, Chandigarh University, Gharuan, Punjab-140413, INDIA	Green and Sustainable synthesis of cobalt oxide nanoparticles from pineapple peel wastes
94	1117	Omolayo M. Ikumapayi1,2, Opeyeolu T. Laseinde2, Temitayo S. Ogedengbe3, Esther T. Akinlabi4	1Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado Ekiti, 360101, Nigeria	Smart Sensors for Real-time Monitoring in a Sustainable Logistics

95	1121	Omolayo M. Ikumapayi ^{1,2} , Opeyeolu T. Laseinde ² , Temitayo S. Ogedengbe ³ , Esther T. Akinlabi ⁴	¹ Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado Ekiti, 360101, Nigeria	Swarm Robotics in a Sustainable Warehouse Automation: Opportunities, Challenges and Solutions.
96	1132	Akinsanya Damilare Baruwa ^{1**} and Mamookho Elizabeth Makhatha ^{1*}	Metallurgy Department, University of Johannesburg, South Africa	Effect of aging time on the sustainability of microstructure, corrosion, and mechanical of Al6061
97	1136	Onndwela Ramalamula ¹ , Akinsanya Damilare Baruwa ^{1**} and Mamookho Elizabeth Makhatha [*]	¹ Metallurgy Department, University of Johannesburg, South Africa	Effect of Heat Treatment Conditions on the Electrochemical Capability and Mechanical Properties of Titanium Grade V Alloy for Biomedical Applications
98	1145	Dr. P. Vanishree Sah ^{1, a)} , Dr.D.Indira ^{2,b)} , Dr. Gururajan Padmavathi ^{3,c)}	Associate Professor, H&S Department, CVR College of Engineering, Ibrahimpatnam- 501510	Perception of Consumers towards Sustainable Omni-Channel Retailing
99	1156	Raman Goud ¹ , MarneniSarika ¹ , Chinavath Soniya ¹ , H krupal	Department of Mechanical Engineering, GokarajuRangaraju Institute of Engineering and Technology, Hyderabad, Telangana	Design and analysis of a quadcopter drone frame using finite element method(FEM)
100	1160	Mani Saraswathi Hallika Pindiprolu ¹ , Vishwanath Kumar Panangipalli ^{2*} , Chivukula V S D Kartheek ²	Department of Mechanical Engineering, G. Narayanamma Institute of Technology and Science (for Women), Hyderabad, Telangana 500104, India	CFD Modelling and Experimental Validation of a Single-Slope Passive Solar Still for Efficient Water Desalination
101	1163	Ravi Katre ¹ , Keval Bhavsar ^{2*} , Ahmed Salaam ³ , GRIET ⁴ , Anandhi R J ⁵ , Atul Singla ⁶ , Manoj Kumar Vishkarma ⁷	Assessing Eco-Friendly Alternatives: Composite Fibers and Recycled Plastics for Sustainable Impact and Efficiency	
102	1166	Chandramohan Pahadel ¹ , Umang Parmar ^{2*} , Ahmed Salaam ³ , GRIET ⁴ , Manjunatha ⁵ , Atul Singla ⁶ , Pramod Kumar ⁷	Comparatively Study of Non-Destructive test with different methods in various curing days	
103	1170	Swapnil Vegad ^{1*} , Sandeep Gawande ² , Ahmed Salaam ³ , Vijilius Helena Raj ⁵ , Amit Dutt ⁶ , Karabi Kalita Das ⁷	Comparatively Study of Compressive Strength of Self-Compacting Concrete with Different Concrete Grade	

104	1175	Ahmed Salaam ¹ , Sandeep Thakur ² , Bhavin kumar Prajapati ^{3*} , GRIET ⁴ , B Rajalakshmi ⁵ , Ginni Nijhawan ⁶ , Bhishm Pratap ⁷	Bio Materials, Biocompatibility & its Advancements in Medical
105	1176	Pulkit kumar ^{1*} , Dinesh Yadav ² , Ahmed Salaam ³ , GRIET ⁴ , Asha V ⁵ , Ginni Nijhawan ⁶ , Ashwani Kumar ⁷	Innovative and Sustainable Transformation of Industrial Sector as a Green Manufacturing Approach
106	1180	Harshil Desai ^{1*} , Ashwini Soni ² , Zahraa Najah ³ , GRIET ⁴ , Rakesh Chandrashekar ⁵ , Ginni Nijhawan ⁶ , Ravi Kalra ⁷	Sustainable Surface Engineering Techniques: Evaluating the Environmental Footprint of Laser and Electron Beam Methods
107	1184	Dhaval Makwana ^{1*} , Zahraa Najah ² , Devendra Soni ³ , GRIET ⁴ , Rakesh Chandrashekar ⁵ , Ginni Nijhawan ⁶ , Ravi Kalra ⁷	Enhancing sleep pattern assessment with bio-compatible smart materials
108	1189	Rushil Shah ^{1*} , Abhijit Saha ² , Zahraa Najah ³ , GRIET ⁴ , Uma Reddy ⁵ , Amandeep Nagpal ⁶ , Pradeep Kumar Chandra ⁷	Role of Quantum Dots and Nanostructures in Photovoltaic Energy Conversion
109	1192	Devendra Singh Thapa ^{1*} , Zahraa Najah ² , Vivek Khosla ³ , GRIET ⁴ , Swathi B ⁵ , Amandeep Nagpal ⁶ , Praveen ⁷	Sustainable Solutions in Sound Shielding: Harnessing Metamaterials for Acoustic Cloaking
110	1194	Anurag Shrivastava ^{1*} , Akhilesh Singh ² , Zahraa Najah ³ , GRIET ⁴ , Anandhi R J ⁵ , Navdeep Singh ⁶ , Pradeep Kumar Chandra ⁷	Sustainable Manufacturing Practices: Evaluating the Environmental Benefits of Biodegradable Polymers and Recycled Metals
111	1196	Umang Parmar ^{1*} , Shaymaa Ahmed ² , Rahul Vayas ³ , GRIET ⁴ , Manjunatha ⁵ , Navdeep Singh ⁶ , Irfan Khan ⁷	Towards Sustainable Ceramic Forming: Techniques, Materials, and Applications in Evolving Paradigms

112	1198	Keval Bhavsar1*, Shaymaa Ahmed2, Mayur Pal Singh Pawar3, GRIET4, Revathi V5, Navdeep Singh6, Dinesh Kumar Yadav7	Sustainability in Electromagnetic Metamaterials: Synthesis, Applications, and Future Directions with Challenges
113	1200	Shaymaa Ahmed1, , Vijilius Helena Raj3*, H Pal Thethi4, Ashish Parmar5, Vandana Arora Sethi6	Comparative Analysis for Contact Pressure of Sustainable Spur Gear Assembly for Various Designs
114	1205	Shaymaa Ahmed1, B Rajalakshmi3*, H Pal Thethi4, Abhishek kaushik5, Vandana Arora Sethi6	Hysteresis Stress, Strain and Penetration Analysis of Spur Gear Assembly for Various Sustainable Design
115	1209	Asha V1*, GRIET2, Shaymaa Ahmed3, H Pal Thethi4, Neeraj Chahuan5, Lalit Kumar Tyagi6	An Analysis of the Structural Properties of 3D Printed Square Blocks Prepared using Sustainable Thermoplastic Polyurethane (TPU) Material
116	1212	Rakesh Chandrashekar1*, Nibras Hayder2, GRIET3, Sorabh Lakhanpal4, Deepika Arora5, Lalit Kumar Tyagi6	Thermal Analysis of Radiator Using Sustainable Graphene oxide Nanofluid Mixture of Ethylene Glycol and Water
117	1215	Aravinda K1*, Nibras Hayder2, GRIET3, Sorabh Lakhanpal4, Harjeet Singh5, Shilpa Pahwa6	Finite Element Analysis of 3D Printed Block Prepared of Sustainable Acrylonitrile Butadiene Styrene (ABS)
118	1218	Ved Prakash Mishra1, Nibras Hayder2, GRIET3, Uma Reddy4*, Sorabh Lakhanpal5, Ankit Meheta6, Shilpa Pahwa7	Sustainable Compositions and 3D Printing Technologies for Characterizing and Optimizing Recycled PETG
119	1223	Jitendra Singh Yadav1, Nibras Hayder2, GRIET3, A. Kakoli Rao4, Swathi B5*, Alok Jain6, Shivani Singh7	Finite Element Analysis of 3D Printed Sustainable Polylactic Acid (PLA) Square Blocks
120	1224	Yogesh Vishwakarm1, Nibras Hayder2, GRIET3, Anandhi R J4*, Alok Jain5, Shashi Prakash Dwivedi6, Shivani Singh7	CFD Analysis of using Deionized Water in Radiator to Enhance the Efficiency for Sustainable Growth

121	1229	Sarvesh Vyas ¹ , Ali K. Alhussainy ² , GRIET ³ , Manjunatha ^{4*} , Arun Pratap Srivastava ⁵ , Alok Jain ⁶ , Ashish Kumar Parashar ⁷	Analytical Review on Enhancing Sustainability in microsystems by Integrating MEMS for Compact Design
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141	1315	Abhishek Saxena ¹ , Rajesh Gundlapalle ^{2*} , Manish Gupta ³ , GRIET ⁴ , Harjeet Singh ⁵ , Ali Albawi ⁶ , Lalit Kumar Tyagi ⁷	Hybrid Wind-Solar System with UPQC
142	1317	Ravi Shankar Raman ¹ , Gurulakshmi A B ^{2*} , Lavish Kansal ³ , GRIET ⁴ , Ankit Meheta ⁵ , Lalit Kumar Tyagi ⁶ , Ali Abdulhussein Hameed ⁷	The Future of Smart Buildings: Integration of IoT in Construction Engineering
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192	1569	Phaneendra babu Bobba, Solange Guéhot1 , Mohd Hamza Anwar2, and Agnès Henri1	LI-FI : DATA TRANSMISSION THROUGH LIGHT
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198	1592	M. Thirunavukkarasu ² , Gunamgari Bharath Reddy ³ , Ram.Subbu ⁴	Analysis of the stir casting parameters of Al 6000 series composites using TOPSIS method
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203	1619	T. Leonila ¹ , N.Ramakrishnan ² , A. , S.Subbu ⁴	A Comprehensive Analysis of Mechanical Improvements in Hemp Fiber Reinforced Polymer Composite
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205	1628	K.Raja2, R.Rajasekar3, Ramaswamy Subbu4	EXPERIMENTAL INVESTIGATION ON THE EFFECT OF DIFFERENT REFLECTING SURFACE BY USING BOX TYPE SOLAR COOKER
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S.NO	Manuscript Number	Author Names	Affiliation	Paper Title
1	1	Roopesh Kumar	Research Scholar, Department of Mechanical Engineering, CSIT Durg, C.G.-491001 India	Design and Finite Element Analysis of the Natural Fiber Reinforced Polymer Hybrid Composite Automotive Fuel Tank
2	4	Amit Kumar Rana	Department of Mechanical Engineering, Faculty of Science and Technology, The ICFAI University Tripura, Agartala -799210, India	Elastic-plastic FE analysis for specimen J-resistance curve of 22NiMoCr37 steel
3	6	Salil Kumar Shrivastava	Department of Applied Mechanics Motilal Nehru National Institute of Technology Allahabad, Prayagraj, U.P., India-211004	Simulation Study of Effect of Temperature on Deformation Behaviour of Magnesium-Aluminium Using LAMMPS
4	8	Shiva Prakash. S	Department of Mechanical Engineering, New Horizon College of Engineering, Bangalore	Zero-Waste Manufacturing and Waste Minimization Strategies for Sustainable Production
5	13	Sudarshan T. A	Department of Mechanical Engineering, New Horizon College of Engineering, Bangalore	Development of a Portable Non-Destructive Examination System for Rapid Inspection of Concrete Structures

6	23	Raghu tilak reddy	Department of Mechanical Engineering, New Horizon College of Engineering, Bangalore	Design and Development of Biomimetic Materials for Regenerative Medicine Applications
7	25	S Kartik Shubham	Department of Mechanical Engineering, Maulana Azad National Institute of Technology, Bhopal, M.P., India	Development and Testing of Polymer Matrix Hybrid Composites Reinforced with nanoSiO ₂
8	30	Meenakshi Rajpurohit	MTech, Department of Physics, MANIT, Bhopal, MP, India.	Advanced Pyroelectric Materials for High-Performance Infrared Detection: Design, Simulation, and Optimization Using Finite Element Method in COMSOL Multiphysics
9	34	Soni Tiwari	Department of Mechanical Engineering, GLA University, Mathura, UP, India	Advanced Machining of Biomedical Materials for Orthopedic Implant Applications
10	36	Madhusudan Baghel	Department of Mechanical Engineering, Maulana Azad National Institute of Technology, Bhopal, Madhya Pradesh, India	Optimization of Machining Parameters in Drilling of Al6082 Nanocomposites
11	37	ANURAG NAMDEV	Department of Mechanical Engineering, Institute of Engineering and Technology, Lucknow, UP, India	Investigations on Mechanical and Physical Properties of Graphene Functionalized on Curaua Fiber/ nanoSiO ₂ Hybrid Composites
12	38	ANURAG NAMDEV	Mechanical Engineering Department, Institute of Engineering & Technology, Lucknow, Uttar Pradesh, India	Impact of Different Orientation of Bidirectional Fiber on Mechanical Properties of Jute Reinforced Epoxy Composites
13	39	Chetan P. Nikhare	Penn State University, Erie, PA, 16510, USA	Analysis of 3D Printed Material Properties Through Biaxial Test
14	40	Chetan P. Nikhare	Penn State University, Erie, PA, 16510, USA	Examination of Springback Phenomenon in Polyactic Acid (PLA)-Aluminum Alloy Multi-Layer Material Bending
15	43	Zanele Veronica Mnisi	Department of Civil Engineering, University of South Africa, Johannesburg 1710, South Africa	The Effect of Fly Ash as Cement Replacement and Dry Wastewater Sludge as Sand Replacement on the Mechanical Properties of Concrete and Mortar

16	44	Lewis Wallace	Department of MAE, University of Strathclyde, Glasgow, United Kingdom	Suitable Material Modelling Techniques for the Characterization of Woven Bio-Fabrics
17	45	Batchu Ramanjaneyulu	Research Scholar, JNTU Hyderabad and Assistant Professor, CVR College of Engineering Hyderabad - 501510, Telangana, India	A Physical Modeling Study on Load - Settlement Behaviour of Lime Stabilized Copper Slag Cushion Laid over Expansive Soil Bed
18	47	Kautilya Sunilkumar Patel	Mechanical Engineering Department, Institute of Technology, Nirma University, Ahmedabad – 382481, India	Effect of Process Parameters on Tensile Strength for 3D Printed Carbon Fiber Polylactic Acid Composites
19	48	SATHEESH KUMAR K.V	Department of Mechanical Engineering, Kongu Engineering College, Perundurai, Erode, 638060, Tamilnadu, India	Comparative Investigation of Temperature, Velocity and Pressure on Solar Dehydrator Using CFD Approach
20	51	Ajaya Bharti	Department of Applied Mechanics, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, Uttar Pradesh, 211004, India.	Reanalysis of Phase Change Materials used for Enhancement of Solar Energy Absorption
21	54	Imhade P. Okokpujie	Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, 2028, South Africa	Tools Wear Mechanisms During Machining: its Related Problems and the Way-Forward: A Review
22	58	C. Raghavendra	2Associate Professor, Dept. of Emerging Technologies, CVR College of Engineering, Hyderabad	Investigation on advanced metallic fabrication materials using artificial intelligence
23	66	L. Prince Jeya Lal	2Department of Mechanical Engineering, Rajalakshmi Institute of Technology, Chennai 600124, Tamil Nadu, India	Assessment of the tribological properties of Al 6081 hybrid composites manufactured through powder metallurgy
24	74	DSNM Rao	3 Department of EEE, Gokaraju Rangaraju Institute of Engineering & Technology, 500090, Telangana, India	Recent Evolution, Current Status, and Future Observations on Global Oceans Heat Content using GOOS
25	75	L. Prince Jeya Lal	2Department of Mechanical Engineering, Rajalakshmi Institute of Technology, Chennai 600124, Tamil Nadu, India	Application of Taguchi and Response Surface Methodology towards the optimization of the process parameters for wire electrical discharge machining of Inconel 601

26	80	AZEEZ Temitayo Mufutau	Department of Mechanical and Mechatronics Engineering, Afe Babalola University, PMB 5454, Ado Ekiti, Nigeria.	Experimental and Numerical Investigation of Extrusion Ratio and Load as a Forming Parameters for Al 6063
27	81	AZEEZ Temitayo Mufutau	Department of Mechanical and Mechatronics Engineering, Afe Babalola University, PMB 5454, Ado Ekiti, Nigeria.	Numerical and Experimental Investigation of Lubricant Viscosity, Ram Speed and Number of Passes on Aluminum 6063 Alloy Extrusion
28	82	Sabitha Jannet	2Assistant Professor (SG), Mechanical Department, Karunya Institute of Technology and Sciences, Coimbatore-641114, India	Development of Hybrid nanoparticles reinforced surface composite layers produced on a copper substrate using friction stir processing
29	84	Saeed Eyvazinejad Firouzsalar	2Department of Civil and Environmental Engineering, University of Auckland, Auckland CBD, Auckland 1010, New Zealand	Comparative analysis of thermal properties of synthetic and natural fibre-reinforced polymeric composites
30	89	Sai Vempati	University of A Coruña, Campus Industrial de Ferrol, CITENI, Spain	Thermo-Mechanical Analysis Of LARES-2 Satellite Components
31	92	G. Mallikarjuna Rao	Professor, CSE, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, India.	Material Science Innovations in Bone Smart: An AI-Powered Breakthrough in Osteoporosis Diagnosis and Treatment Recommendations
32	95	Cynthia Samuel Abima	Mechanical Engineering Science, University of Johannesburg, Johannesburg, South Africa.	The Efficacy of Additive Manufacturing in the Repair and Remanufacturing of Impellers for Axial Flow Pumps
33	97	Cynthia Samuel Abima	Mechanical Engineering Science, University of Johannesburg, Johannesburg, South Africa.	Effect of Heat Input on the Microstructural and Mechanical Properties of TIG-MIG Hybrid welded AISI 1008 steel
34	101	B Satish Ben	Department of Mechanical Engineering, National Institute of Technology, Waranagl-506004, Telangana, India	Synthesis and Characterization of Thermally Remendable Epoxy Polymer Composite through Diels-Alder Bonding

35	104	Raj Kumar Pittala	2Department of Mechanical Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram-522302	Performance analysis of open belt drives with various materials: A comprehensive study on Torque, Power loss and Stress of belts using MathWorks.
36	105	Imhade P. Okokpujie	Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, 2028, South Africa	Study of the Characteristics of Polyurethane Foam as a Sustainable Thermal Insulation Material Used for Residential Roofing Systems for Energy Conservation: A Review
37	108	Sirisha Bandi	B V Raju Institute of Technology, Narsapur, Telangana, India	Synthesis by Facile Solid-State Process, Characterisation and Photoluminescence properties studies of Trivalent Doped Lanthanide Orthophosphates
38	113	Imhade P. Okokpujie	Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, 2028, South Africa	Development of Nano-Carbon-Based, Polymers and Electrochemical Systems Towards Achieving Sustainable Energy Storage System: A Review
39	114	Imhade P. Okokpujie	Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, 2028, South Africa	Evaluation and Prediction Analysis of Nano-Lubricant on Tool Wear Via Machining of Titanium Alloy Using Artificial Neural Network
40	118	R. Jagadeeswari	Department of Chemistry, KPR Institute of Engineering and Technology, Coimbatore 641407, Tamil Nadu, India.	Adsorption characteristics of Co(II) and Ni(II) from aqueous solution by activated maize cob as a bio-sorbent material
41	119	Anurag Namdev	Department of Mechanical Engineering, Institute of Engineering and Technology, Lucknow, (U.P.), India	Abrasive wear performance of epoxy Nano composite containing GNP