



Dr. SHUBHAM SHARMA

‘Recognized by Stanford University’s list (published by Elsevier) of the World’s Top 1% of the Most-Cited Scientists in Single Year Citation Impact 2023, 2024. (MATERIALS SCIENCE; MECHANICAL ENGINEERING)

‘Recognized by Stanford University’s list (published by Elsevier) of the World’s Top 2% of the Most-Cited Scientists in Single Year Citation Impact 2022, 2023, 2024. (MATERIALS SCIENCE; MECHANICAL ENGINEERING)

<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4>.

<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6>

Top 2% Most Influential Scientists (Single Year) in 2023, 2024 Stanford University List: Analysis of Indian Researchers.

<https://insights2techinfo.com/top-2-most-influential-scientists-single-year-in-2023-stanford-university-list-analysis-of-indian-researchers/>

SCI/SCI-E/Scopus/ESCI document publications	Scopus citations	Scopus h-index
418 (SCI/SCIE-173) (Scopus-81) (Scopus+ESCI-50) (Scopus+ESCI+CPCI-40)	11445	54

**H.NO - 191/9A, Preet Nagar, Ladowali road, Jalandhar city,
Punjab, Pin Code – 144001**

Email: shubham543sharma@gmail.com

Alternative Email(s): shubhamsharmacsirclri@gmail.com

Phone No: +91-7009239473

What's app number: +91- 9478395371

Scopus Source Id:

<https://www.scopus.com/authid/detail.uri?authorId=5721142217>

LinkedIn Profile URL:

<https://www.linkedin.com/in/shubham786sharma>

Skype User ID name: shubham543sharma;

<https://join.skype.com/vhoXRRXLqSPa>

Zoom ID:

<https://us04web.zoom.us/j/6551328242?pwd=ZVJkNXhYK1g4M0RsS2Y3RUVkaXIDUT09>

Zoom personal meeting ID: 655 132 8242

LONGEVITY CAREER GOALS:

To build a long-term career either as a reputable university professor or as a Research Scientist in the extensive domain of Research & Development (R&D) that offers opportunities for career growth, and to keep up with cutting-edge teaching technologies which helps to offer project-based learning to the students.

AREAS OF RESEARCH INTEREST

- ❖ Advances in Mechanical Engineering, Manufacturing Technology, Advanced Materials Science and various characterizations. Destructive and Non-Destructive testings.
- ❖ Sustainable Machining, Sustainability, Industry 4.0, Automation, Advanced Materials and Manufacturing Processes.
- ❖ Renewable and Non-Renewable energy resources and Biomedical applications.
- ❖ Solid waste management. Development and installation of eco-friendly and low-cost manufacturing process for the conversion of solid, industrial, domestic, agricultural and municipal waste into

value added products and applications.

- ❖ Thermoplastics, Thermosetting resins and composites, Natural fibers/Polymer composites & bio-composites
- ❖ Non-Traditional Machining, Additive Manufacturing Processes, Lean & Agile Manufacturing etc.
- ❖ Nanoscience, Nanotechnology, Synthesis, Characterization of Nanofluids.
- ❖ Engineering Mechanics, Acoustical properties such as noise and vibrations & Heat Treatment Processes.

DETAILED PROFESSIONAL EXPERIENCE

1. Council of Scientific and Industrial Research (CSIR)- Central Leather Research Institute (CLRI), RCED-Jalandhar, Punjab, 144021, India.

Since 08'17- 01'20

Website: www.clri.org

Company Profile: CSIR-CLRI foresees to be the global hub that would transform the leather industry into one which is technology and innovation driven, thus steering India to be the global leader in Leather.

The role of CSIR-CLRI in scientific industrial research space of India is very focused. Objective of the institute is to meet the needs of the leather and allied sectors through research, technology development and transfer, training and industrial support and formulation of policies and plan of action that ensures a technology based competitive advantage for Indian leather. Leather technology, which deals with tanning raw hides and skins and finishing the tanned leather to impart to it the specific properties which it should have to be suitable for making particular types of leather articles either for military or civilian use, although very old, is still making progress. Its progress has been due to the application of various branches of science to it and research which is being carried out to explain the principles underlying the old craft of tanning, to throw light on the mechanism whereby the profound change viz., the conversion of putrescible raw hides and skins into imputrescible and permanent leather is brought

about to improve the old techniques of leather manufacture and to work out new techniques with the help of modern science and machinery.

RCED Jalandhar is one of the four extension centres of CLRI, Chennai. It was started to benefit the Leather and Leather products industries in the state of Punjab. The centre is fully equipped with Chemical, Physical & Eco testing Laboratory. This centre has a pilot Tannery which provides varied services to the industry. This centre organizes Training programme in Leather goods and leather garments.

Designation: Junior Research Fellow (from 16-08-2017 to 15/08/2019) and Senior Research Fellow (from 16/08/2019 to 31/01/2020).

Job duties & responsibilities (to be attested from employer)

Carry out experimental research work of the project entitled, “Studies on Leather Solid Waste-Polymer Composites for Acoustic Applications” directed by the members of the PI, Project Implementation Committee (PIC) and CLRI, RCED, Jalandhar.

- i. Sourcing of materials for the implementation of project.
- ii. Procurement of materials for the implementation of project.
- iii. Design and Execution of Experimental Research work.
- iv. Testing of the fabricated materials.
- v. Characterizations of the fabricated materials.
- vi. Data compilation and Analysis.
- vii. Preparation of Interim, and final project reports and manuscripts for publication.

Projects Handled:

- i. “Studies on Leather Solid Waste - Polymer Composites for Acoustic Applications" a 3 Years project, Sectioned by SERB (DST) with funding of Rs 32,97,740 Lakh.
- ii. “Studies on Leather solid waste reinforced thermosetting Polymer composites for high strength Structural applications” a 3 years project, Sanctioned by CSIR-Central Leather Research Institute (MLP-33) under

Applied Research category with funding of Rs. 5,35,000 Lakh.

2. **S.K. Manufacturing Company, Jalandhar, India**

Since: 04'20-04'22

Website: <http://www.skautoparts.in>

Company Profile: 'SK' a name founded way back in 1965, has grown from a small family run company to one of country's leading manufacturer of automotive spare parts; Tractor parts and agricultural implements.

Now, S.K. Manufacturing Co. is leading manufacturer of Automotive, Tractor spare parts and Agricultural implements of India and are located in the industrial town in Jalandhar in the state of Punjab. The Plant is modern, having all requisite manufacturing facilities as also a well-engineered utility section.

The secret of our success is the uncompromising business standards of its management and the company's unrelenting focus on quality. We have scientifically laid out modern machinery, which is run under the guidance of qualified experienced engineers, by a team of well-trained motivated workers in bright, way of neat working conditions. In our company whole of process, from pattern and die making to finishing of goods, are carried out under one roof.

For us "the interest of the consumer is the top priority and therefore "Quality is our creed".

That is why each product is made from the finest materials and is subjected to stringent, rigorous checks and inspection by qualified engineers with latest inspection tools at every stage of manufacture.

We have a large number of dealers throughout India who sell 'SK' automotive parts with confidence. They are served by an army of technically trained sales representatives.

Designation: Research and Development Engineer

Job duties & responsibilities (to be attested from employer)

- i. Analyzing the machine tools and die making materials developed.
- ii. Implementing the machine tools and die making materials

developed.

- iii. Testing the machine tools and die making materials developed.
- iv. Develop process improvements to effectively utilize equipment and materials to maximize production.
- v. Creating designs for machine tools and die making materials based on functional innovative concepts.
- vi. To perform market research in order to evaluate alternative types of machine tool and die-making products for better viability.
- vii. Analyzing new products and developing its Die for moulding.
- viii. Stay current with product specifications, engineering technology and production processes.

Projects Handled:

- i. Developing of Bogie brackets for Hino vehicles.
 - a. Development of moulding dies on match plates.
 - b. Development of machining fixtures for Hino vehicles.
 - c. To finalize the machined product on vertical machining centres using suitable Machining and Geometric codes-based CNC Programming.
- ii. Development of PTO-based special gear housing for TATA-709 vehicle.
 - a. Development of moulding dies on match plates.
 - b. Development of machining fixtures for TATA-709 vehicles.
 - c. To finalize the machined product on vertical machining centres using suitable Machining and Geometric codes-based CNC Programming.
- iii. Tool and die design for machine mould and automatic filling for hand mould tool, vertical and horizontal flow tools.
- iv. Design and fabrication of specialized jig and fixtures, and tool cutting force dynamo meter on conventional machines.

3. **Chandigarh University, University Centre for Research and Development, Mohali, Punjab, India.**

Since: 05'22-till date

Website: <https://www.cuchd.in/>

Company Profile: Chandigarh University (CU) is a leading Indian Institution offering its students a unique amalgamation of professional and academic excellence. The University has been accredited with the prestigious A+ grade by the National Assessment and Accreditation Council (NAAC). Chandigarh University has become Youngest and the only private university in India to bag an A+ grade in the first cycle of the accreditation process and has also become the only state private university of Punjab to be accredited by NAAC. Also, ranked among Asia's best and fastest-growing universities, CU has coupled the experience of top industry leaders and renowned academicians to foster a global approach. A wide spectrum of programs paired with flexibility, experiential learning and interdisciplinary orientation emancipate our students to explore their interests and pursue dream careers. At CU we are grooming students to be socially sensitive through intellectually challenging and contemporary diverse culture.

Designation: Professor

Job duties & responsibilities (to be attested from employer)

- a. Applied for International cooperative research projects from the Ministries.
- b. Publication of atleast 15 high-level papers in prestigious esteemed SCI/SCI-E indexed Journals.
- c. Jointly supervision of PG, UG, and PhD students, and hold academic lectures for teachers and students.

ADDITIONAL PROFESSIONAL JOB-RESPONSIBILITIES RELATED RESEARCH & DEVELOPMENT WITH ACADEMICS EXPERIENCE

- Appointed as a **Visiting Research Professor** at one of the prestigious esteemed, **Qingdao Technological University** (Recognized from the Ministry of Education in China, MCI India, World Federal Medical Education, and WHO with an Excellent Engineer Education and Training research centers, Best Global Universities ranking-723, National Ranking-90, Best Global ranking in Aisa-372, and in the School of

Mechanical & Automotive Engineering Qingdao University of Technology,
China from May 1, 2022, to April 30, 2025.

RESEARCH SCHOLAR(S) GUIDANCE:

- Guided more than ten students of Bachelors of Technology (B-Tech) & six students of Masters of Technology (M-Tech) in Research work/Dissertation/thesis & Industrial Projects of core Mechanical engineering field during Research tenure at Council for Scientific & Industrial Research (C.S.I.R.) - Central Leather Research Institute (C.L.R.I.), Regional Centre for Extension & Development, India.
- Worked as a Mechanical Engineer trainee in Jai Bharat Maruti Limited, Joint Venture complex of Maruti Suzuki, Gurgaon city, Haryana state for six months (26 May-26 November).

SPEAKER INVITATIONS/GUEST LECTURE INVITATIONS

- Invitation for delivering a Lecture as a speaker, in an inaugural Second World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences (WCM 2018) conducted by Hotel National Park, in association with Mahatma Gandhi University, Kottayam, Kerala, India on 10-12th August 2018, Kottayam, Kerala, India.
- Invitation for delivering a Lecture as a speaker, in an inaugural "8th International Conference on Environmental Chemistry and Engineering" conducted by Berlin, Germany/ Golden Tulip Berlin – Hotel Hamburg on September 20-22, 2018, Berlin.
- Invitation for delivering a Lecture as a speaker, in an inaugural "Fourth International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2019)" conference which will

be held in Mahatma Gandhi University, Kottayam, Kerala, India during April 12-14, 2019.

- Invitation for delivering a Lecture as a speaker, in an inaugural “Metallurgy Summit-2019” conference which will be held in Milan, Italy during March 28-29, 2019.
- Invitation for delivering a Lecture as a speaker, in an inaugural “International Conference on Materials Research and Nanotechnology, Outlining the forefront Research: Materials Science-Nanotechnology-2019” conference which will be held in Rome, Italy during June 10-12, 2019.
- Invitation for delivering a Lecture as a speaker, in an inaugural “Fifth International Conference on Polymer Processing and Characterization (ICPPC - 2019)” conference which will be held in Mahatma Gandhi University, Kottayam, Kerala, India during October 11-13, 2019.
- Invitation for delivering a Lecture as a speaker, in an inaugural “Third International Conference on Advanced Materials for Power Engineering (ICAMPE 2019)” conference which will be held in Mahatma Gandhi University, Kottayam, Kerala, India during August 9-11, 2019.
- Invitation for delivering a Lecture as a speaker, in an inaugural “World Congress on Functional Materials and Nanotechnology- 2019” conference which will be held in Valencia, Spain during May 13-14, 2019. I am also honour as one of the committee members of the conference.

And many more.....

INTERNATIONAL CONFERENCES/SEMINARS ORGANIZED

- Authorized as a **Conference Secretariat Board member and Scientific Committee member** in the First International Conference of Information Technology, Engineering & Science (ICOITES), organized by University of Kufa, Najaf, Iraq on 22nd-23rd March 2020. [Please check the Secretariat

Board member at the Conference Link: <https://www.icoites.com/en/>].

- Authorized as a **Conference Session chair and organizers** for the “**Smart Manufacturing – Industry 4.0**” track-session in the Sixth International Conference on Research in Intelligent and Computing in Engineering (RICE-2021), organized by Thu DAU Mot University, Vietnam on 3rd-4th June 2021. [Please check the Conference Link: <https://riceconference.in/special-dates/>].
- Authorized as a **Conference Secretariat Board member and Scientific Committee member** in the Iraqi Academics Syndicate International Conference for Pure and Applied Sciences (**IICPS**), organized by Academics Syndicate - Babylon Branch, with Cooperation of University of Babylon on **14th November, 2020**. [Please check the Secretariat Board member at the Conference Link: <http://iicps.net/>].
- Authorized as a **Guest-Editor** (for Journal of Engineering Research, Open Computer Science-De Gruyter, IOP Journal of Physics conference Series) and Scientific Committee board member in the Al- Kadhum International Conference of Modern Application on Information and Communication Technology (MAICT), organized by **Imam Al-Kadhum College (IKC), Al-Thakawat Foundation for Culture, Intellect and Arts (TCIA), Statistical and Informatics Consultation Center, KUFA University** on 11th-12th January 2020. [Please check the Guest Editor Board member at the Conference Link: <http://info-comm.tech/>]
- Authorized as an Advisory Board member for the International Conference on E-Mobility (ICOEM2020), organized by **PSG College of Technology, Coimbatore, India** on 26th-27th June 2020. [Please check the Advisory Board member at the Conference Link: www.psgtech.edu/icoem2020/]
- Authorized as a Technical Committee member for the 2020 International Conference on Advanced Materials, Information Systems and Mechanical Engineering (AMISM 2020), organized by Ottawa Conference and Event Centre, 200 Coventry RD. Ottawa, K1K 4S3, Canada on 12th-13th September 2020. [Please check the Advisory Board member

at the Conference Link:

<http://www.amism.org/com.html>

➤ Authorized as an International Advisory Board member and Scientific Committee member in the 3rd International Scientific Conference of Engineering Sciences and Advances Technologies (IICESAT), organized by College of Material Engineering, University of Babylon, Iraq on **4-5 June, 2021**. [Please check the International Advisory Board at the Conference Link: <http://www.iicesat.com/index.php> <https://www.icoites.com/en/>].

➤ Authorized as an International Advisory Scientific Committee member in the International Conference on Sugar Palm and Allied Fibre Polymer Composites 2021- (SAPC 2021), organized by The Malaysian Society of Sugar Palm Development and Industry (PPIEM) with co- organizers as follows,

1. Institute of Tropical Forestry & Forest Products (INTROP), Universiti Putra Malaysia, MALAYSIA,
2. Faculty of Engineering, Universiti Putra Malaysia, MALAYSIA,
3. School of Chemical and Energy Engineering, Faculty of Engineering, Universiti Teknologi Malaysia, MALAYSIA,
4. Centre for Advanced Composite Materials (CACM), Universiti Teknologi Malaysia, MALAYSIA,
5. Technical University of Liberec CZECH REPUBLIC,
6. National Textile University, Faisalabad, PAKISTAN,
7. Andalas University, Padang, INDONESIA,
8. University of Mataram West Nusa Tenggara Indonesia, INDONESIA,
9. University of Jember, INDONESIA,
10. King Mongkut's University of Technology North Bangkok, THAILAND,
11. Kalasalingam Academy of Research and Education, INDIA,
12. Universidade Estadual de Londrina, BRAZIL,
13. University of Gambia, GAMBIA,

on **11 December, 2021**. [Please check the International Advisory Scientific Committee Member Board at the Conference Link: <https://sapc2021.com/international-advisory-scientific-committee>/<https://www.icoites.com/en/>].

- Authorized as an International Organizing Committee member in the 3rd International conference on Energy and Power (ICEP2021), organized by College of Material Engineering, Chiang Mai University, Thailand and Zhejiang University, China in association with the Australian Society of Energy and Power (ASEP) on **18-20 November, 2021**. [Please check the International Organizing Committee at the Conference Link: <https://sites.google.com/view/3icep2020/homehttps://www.icoites.com/en/>].

- Authorized as an International Scientific Committee member in the 1st International conference on Innovation in Engineering (ICIE'2020), organized by University of Minho – School of Engineering, Mechanical Engineering, Department Campus de Azurém, 4800-058, GUIMARÃES PORTUGAL on 28-30 June, 2021. [Please check the International Scientific Committee at the Conference Link: <https://icieng.eu/committees/https://www.icoites.com/en/>].

- Authorized as an **INTERNATIONAL ADVISORY SCIENTIFIC TECHNICAL COMMITTEE FOR COMPOSITE SCIENCES AND TECHNOLOGY INTERNATIONAL CONFERENCE 2022 (COMSAT2022)**, organized by the Composite Sciences and Technology International Conference 2022 (COMSAT2022) Centre for Advanced Composite Materials (CACM) Universiti Teknologi Malaysia on 22nd – 23rd of August 2022. [Please check the International Scientific Committee at the Conference reference number: **UTM. J.09.07.03.01/25.10/3 Jld. 3 (38)** <https://www.icoites.com/en/>].

JOURNAL EDITORS

- Wuhan EditSprings Technology and Culture Co., Ltd

JOURNAL REVIEWER/LEARNT REFERRE

Reviewed various manuscripts for the following reputed Journals as per Publons database:

- Composites Part-B (Elsevier)
- Journal of Magnesium and Alloys (Elsevier)
- International Journal of Production Research (Taylor's & Francis)
- Non-Linear Dynamics (Springer)
- Polymer Composites (Wiley)
- 3D Printing and Additive Manufacturing
- International Journal of Biological Macromolecules (Elsevier)
- Journal of Thermal Analysis & Calorimetry (Springer)
- Materials Research Express (IOP Science)
- 2D Materials (IOP Science)
- International Journal of Energy Research (Wiley)
- IEEE Access (IEEE)
- Journal of Materials (Springer)
- Tribology in Industry
- International Journal of Production Economics (Elsevier)
- Current opinion in Electrochemistry
- Biomass conversion and Biorefinery
- Jordan Journal of Mechanical and Industrial Engineering
- Advanced Engineering Materials (Wiley)
- Polymer Engineering and Science (Wiley)
- International Journal of Polymer Science (Hindawi-Wiley)
- Journal of Materials Engineering and Performance (Springer)
- International Journal of Metal Casting (Springer)
- Environment, Development and Sustainability (ENVI) (Springer)
- Engineering Research Express (IOP Science)
- Process Integration and Optimization for Sustainability (Springer)
- Journal of Polymers and the Environment (Springer Nature)
- Materials Chemistry and Physics (Elsevier)
- Journal of Advanced Research (Elsevier)
- Science of the Total Environment (Elsevier)
- The International Journal of Advanced Manufacturing Technology (Springer)

- Frontiers in Materials
- Expert Systems with Applications (Wiley)
- Concurrent Engineering: Research and Applications
- Materials Chemistry and Physics (Elsevier)
- Tribology International (Elsevier)
- Materials (MDPI)
- Polymers (MDPI)
- Applied Sciences (MDPI)
- Energies (MDPI)
- Processes (MDPI)
- Metals (MDPI)
- Lubricants (MDPI)
- Molecules (MDPI)
- International Journal of Nanomedicine (Dove Medical Press)
- Journal of Clinical and Translational Research (JCTRES)
- Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering (Sage)
- Material's Today Journal (Elsevier)
- Measurement and Control (Sage)
- International Journal of Low-carbon technologies (Oxford Press)
- Environmental Progress (Wiley)
- AIMS Bioengineering
- Current Medical Imaging (Bentham Science)
- Current Alternative Energy (Bentham Science)
- Key Engineering Materials (Trans Tech)
- Evergreen
- Applied Science and Engineering Progress
- Journal of Production system and Manufacturing Science (Imperial Open Journal)
- Academic Exchange Information Centre, AI Scholar Expert Reviewer team (China)
- Bentham Science
- Pisco-med Publishers Singapore, Insights: Engineering and Technology Journal
- Materials Science Research India, an International peer reviewed research journal

EDUCATIONAL QUALIFICATIONS

Degree/ Certificate	Institution/Board	Year	C.G.P.A./ Percentage
Post-Doctoral Research Fellowships (Mechanical Engineering)	Indian Institute of Technology, Ropar, Punjab, India. (2022) Lebanese American University, Lebanese American University, Kraytem Beirut, Lebanon. (2023- 2024)	2022 & 2023-2024	DISTINCTION
P.h.D. (Mechanical Engineering)	In collaboration with Council of Scientific and Industrial Research-CLRI, Chennai, Central Govt. affiliated, and I.K. Gujral Punjab Technical University, Jalandhar city	(August 2018-June 2022)	84.7%
ME/M-Tech (Mechanical Engineering)	D.A.V. University, Jalandhar city	(2015-2017)	9.43 CGPA OR 94.3%
BE/B-Tech (Mechanical Engineering)	I.K. Gujral Punjab Technical University, Jalandhar city	(2011-2015)	82.8025%
H.S.C.	Police D.A.V. Public School, P.A.P. Complex, Jalandhar Cantt (C.B.S.E.)	(2011)	69.20%
S.S.C.	Police DAV Public School, PAP Complex, Jalandhar Cantt (C.B.S.E.)	(2009)	72.20%

BRIEF INFORMATION ON PhD RESEARCH WORK:

PhD thesis title: Studies on the Industrial Leather solid waste/Recycled/Low-cost Polymer Composites for Multi-functional applications

Brief Overview: In my doctoral studies, I have utilized industrial Leather wastes in combination with recycled polymer materials for the fabrication of composites for value-added applications, thus reducing environmental issues and providing a sustainable solution. The leather waste-reinforced recycled polymer composites were fabricated using a two-roll mill followed by a hot-press molding process. Most of my work has revolved around carry-out various physicochemical, thermal, morphological, structural, elemental mapping, microstructural, topographic image-mapping, damping, cushioning, corrosion, electrical, and mechanical properties as mentioned below, to understand the scope of the fabricated composites for suitable applications. In my work, the Mechanical properties (Tensile, Compressive, Tear Strength, Hardness, Impact Strength, Flexural Strength, Adhesion Strength, Abrasion Resistance, and Cushioning and Fatigue-life cycle analysis) were evaluated by Universal Testing Machine (UTM), rotating drum abrasion machine, and Ross-Flexer fatigue testing machine. Thermal properties of the samples were performed using thermo- gravimetric analysis (TGA) and Differential Scanning Calorimetry (DSC) analysis. Morphology of the samples was examined by Scanning electron microscopy (SEM), Atomic Force Microscopy (AFM), XRD, and Energy Dispersive Analysis of X-ray (EDAX). The vibrational damping performance of the composites was determined using the Compression and Resilience test (CRT) and confirmed with cushioning properties. The wear rate, corrosion, fatigue-life cycle, and electrical properties were also studied. The influence of the weight percentage of the Leather fibers and the effect of plasticizers on the physicochemical, mechanical, thermal, volumetric weight-loss, and electrical properties of the fabricated composites were also studied. Additionally, the multi-objective optimization and modeling were carried out to optimize the hot-press molding process parameters through Central-composite- designs (CCD) approach in Response Surface Methodology (RSM). Comparison of the results with existing literature, cost estimation, and economic analysis has

also been carried out to recommend the scope of the fabricated composites for suitable applications such as in leather ancillaries, footwear, packaging, automotive, construction, and transportation and machine industries.

BRIEF INFORMATION ON M-Tech RESEARCH WORK:

M-Tech thesis title: Investigating the performance of an Automobile car radiator by using Aluminum/Water Nanofluid

Brief Overview: In my Master's studies, the necessity of high heat flow processes has created a significant demand for new technologies to enhance heat transfer. For example, microprocessors have continually become smaller and more powerful, and as a result heat flow demands have steadily increased over time leading to new challenges in thermal management. Many methods are available to improve heat transfer in processes. A greater temperature difference DT can lead to increase the heat flow, but DT is often limited by process or material constraints. Maximizing the heat transfer area is a common strategy to improve heat transfer, and many heat exchangers such as radiators and plate-and-frame heat exchangers are designed to maximize the heat transfer area. However, this strategy cannot be employed in microprocessors and microelectromechanical systems (MEMS) because the area cannot be increased. In aerospace and automotive systems, increasing the heat transfer area can only be achieved by increasing the size of the heat exchanger which can lead to unwanted increases in weight. A very small amount of nanoparticles, when dispersed uniformly and suspended stably in base fluids, can provide impressive improvements in the thermal properties of base fluids. Nanofluids, which are a colloidal mixture of nanoparticles (1–100 nm) and a base liquid (nanoparticle fluid suspensions), are the term first to describe the new class of nanotechnology-based heat transfer fluids that exhibit thermal properties superior to those of their base fluids. Heat transfer improvements can also be achieved by increasing the heat transfer coefficient h either by using more efficient heat transfer methods or by improving the transport properties of the heat

transfer material. Additives are often added to liquid coolants to improve specific properties. For example, glycols are added to water to depress its freezing point and to increase its boiling point. The heat transfer coefficient can be improved via the addition of solid particles to the liquid coolant (i.e., microfluids, nanofluids). Micrometer or millimeter-sized solid particles added into a base liquid can improve the thermal conductivity of the fluid. A lot of study has been done on the metal oxide-based nanofluids; however, a very less work has been conducted on metal-based nanofluids. Devices that are used for transferring the thermal energy between fluid and solid surface or between two fluids or more than two fluids in thermal contact when they are at different temperatures are called heat exchangers. Heat exchangers involve only heating or cooling, evaporation or condensation of single and multi-component of fluid and no externally heat and work interaction. Objective of heat exchanger is to recover or reject heat from a system. Flow of heat is the function of heat transfer area, temperature difference and conductive or convective properties of fluid. In this present experimental work, Al/water (Al of 75–135 nm average particle size)-based nanofluid has prepared by using a two-step method. Characterization such as transmission electron microscopy and X-ray diffraction of Al nanopowder/water-based nanofluid has also been taken into account in order to determine grain size, particle size and other morphology properties of nanofluid. Problem is formulated by experimentally studying the rheological properties, such as thermal conductivity, specific heat, density and viscosity of the Aluminum/water nanofluid and then compared these properties with conventional coolant used distilled water. Heat transfer characteristics, fluid flow properties and thermal/ rheological properties were studied by comparing experimental results of Al/water nanofluid at different nanoparticles volume concentration as a coolant in an automobile car radiator with the conventional coolant, i.e., distilled water. The results of these experimental studies play a vital role in improving the thermo-hydraulic performance, overall effectiveness and convective heat transfer coefficient of compact cross-flow heat exchanger and other energy-efficient thermal devices by enhancing thermal conductivity and various other

thermo-physical properties with Al/water nanofluid. Al/water nanofluid has tremendous applications in transportation sectors by simply replacing conventional ethylene glycol or distilled water with nanofluid as coolant which results in eliminating engine heat to huge extent. Moreover, Al/water nanofluid is not restricted to use as coolant in vehicles, but it also serves as a boon for engine oil, transmission oil, brake oil, lubricant, reduces vehicle emissions and saves energy to large extent. Moreover, this Al/water nanofluid also serves as boon in defense application, military vehicle components, high-powered military electronics, marine application, space application, high-power laser diode, electronic application such as microelectromechanical system (MEMS) where devices are built in microlevel, high power density and operating at high speed. For any heat exchanger main requirement is its heat load and how fast and effectively heat exchanger does heat transfer. To increase the heat transfer rate, we have to increase the $(h * A)$ value and this can be done by either increasing surface area or increasing heat transfer coefficient or increasing both, but heat transfer coefficient of fluid cannot be changed and for constant heat transfer coefficient, we can increase either area or temperature. Temperature difference increment has various limits, for example to supply hot fluid at high temperature and cold fluid at lower temperature extra work has to be done. Further increase in temperature leads to thermal stress in material of heat exchanger which leads to the deformation of material and decreases the lifecycle of heat exchanger. To avoid this problem, surface area of exchanger is increased and this need gives rise to birth of compact heat exchanger with large frontal area, short flow length and low convective heat transfer coefficient toward gas side. Nanofluids enhance heat transfer as we know that the size of heat transfer devices is getting scaled down gradually, so it necessitates the better cooling processes. Due to scaling down and high operating speed of devices such as microelectromechanical systems [MEMS], temperature increases to high limits which become a constriction for devices to operate at high power. Fluids used for cooling (water, oil, etc.) have poor thermal conductivity which leads to equipment limitation, reduced thermal and processing efficiency. Nanofluids recently

have made its place in this advanced cooling mechanism and enhanced thermal conductivity of fluids. Enhancement in thermal properties depends on volume fraction of nanoparticles. With small particles concentration of nanoparticles we can increase heat transfer rate in thermal systems and can meet the cooling needs of thermal systems. Nanosize particle plays very important role in the enhancement of thermal conductivity as it has concluded that for the particle size below 50 nm, the enhancement in thermal conductivity increased by 40% when 3% (v/v) CuO particles are used in ethylene glycol. Therefore, nanoparticles enhanced the thermal conductivity and this enhancement makes lighter size heat exchanger with slow flow velocity, leading in reduced pump work attributable to less erosion in pipes and other components. Enhance heat transfer rate because nanoparticles have large surface area to volume ratio. A continuous heat exchange between nanoparticles and base fluid through convection mechanism depending on base fluid temperature and velocity of nanoparticle relative to base fluid increases the heat transfer rate. Role of Brownian movement in heat transfer is very important in case of nanofluids. Heat transfer takes place when collision between particles occurs due to Brownian motion which depends on temperature and viscosity of base fluid and nanoparticle size. As temperature of base fluid increases, its viscosity decreases and Brownian motion increases; hence, conductivity increases. The random motion of particles in base fluid depends on particle size. Decrease in particle size leads to large motion, and convection heat transfer phenomenon becomes dominant. Thus, during my Master's research work, the Al/water nanofluid was fabricated by using chemical process methods at 0.2 and 0.3% nanoparticles volume concentration by adding Al nanoparticles of an average particle size 84 nm into distilled water. Experiments were performed by varying inlet temperature of hot fluid, nanoparticles volume concentration and flow rate of hot fluid. These experiments were conducted to investigate the heat transfer characteristics, rheological properties and thermal performance of an automobile car radiator under completely laminar flow regime. Experiments were conducted on single-pass cross-flow compact heat exchanger by varying the various

parameters such as inlet temperature, flow rate through the heat exchanger, concentration of nanoparticles and velocity of air employed for cooling purpose. It was concluded that the hot side Nusselt numbers are improved by 3.37 and 5.0877% for 0.2 and 0.3% concentrations of nanofluids, respectively, at 318.15 K inlet fluids temperature as compared to base fluids. Colburn factor was increased by 12.94 and 23.45% for 0.2 and 0.3% nanoparticles volume concentration of nanofluids, respectively, at 318.15 K inlet temperature with respect to double-distilled water. Hot fluid side friction factor was increased by 14.04 and 20.916% for 0.2 and 0.3% nanoparticles volume concentration of nanofluids with respect to base fluids, but this average value of friction factor was decreased by 2.29 and 9.1412% when temperature was increased from 318.15 to 323.15 K and 328.15 K, respectively.

IMMIGRATION APPLICATION NUMBER:

Applied for Canada immigration on Permanent Residency (PR) (File serial number (FSN): 503968).

THE INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM (GENERAL IELTS):

- **Candidate Number:** 298260 (General Training)
- **Listening:** 6.5, **Reading:** 6.5, **Writing:** 6.5, **Speaking:** 6.5; **Overall Band Score:** 6.5
- **Common European Framework of Reference (CEFR Level):** B2 Level, Upper-Intermediate independent user
- **Test report form number:** 20IN298260SHAS855G
- **IELTS score Valid upto:** April 2023
- **Passport No.:** Z4612446

TECHNICAL SKILLS, INSTRUMENTAL KNOWLEDGE & COMPUTER COMPETENCIES SKILLS

Computational Skills: Proficiency and strong knowledge of Design of Experiments (DoE), MINITAB, Taguchi Orthogonal Array, ANOVA (1-way & 2-way), and brief introductory knowledge on the Abaqus.

Computer competencies: Advances in MS office (Microsoft Excel, Power-point, Outlook, Microsoft Word); Vosviewer; Cite space bibliometric mapping; Origin; Google Drive; Spreadsheets; E-Mail; Presentations; QuickBooks; Social-Media; Web; Writing skills; Enterprise systems; Graphics; Advanced computer skills.

Laboratory and Instrumentation Skills: Specialized in handling the high temperature furnaces, Experience in the preparation of metallographic specimens, polishing and etching, Proficient experience in various material characterization methods, Experience in interpretation of Dynamic Mechanical Analysis (DMA), Pin-on-Disc or wear measuring Tribo-tester equipment, Thermo-gravimetric Analysis instrument, Differential Scanning Calorimetry instrument, Universal testing Machine (UTM), SEM, XRD, Spectroscopic (UV- Visible, Mass, IR, NMR), Compression Moulding Machine, Vacuum Assisted Resin Transfer Moulding (VARTM), Injection Moulding Machine, Extrusion, Calendering, KD2 Pro Analyzer KS1 Needle, Brookefield DV-111 Rheometer, Pycnometer, Ultra-Sonicator Water Bath, Rotameter, Talysurf Roughness Tester, Anemometer, Pressure, Temperature, Torque, Speed measuring devices, Impedance Tube or Kuntz Tube, Spectrum Analyzer, parallel plate capacitors for Dielectric constant, basics of Nuclear Magnetic Resonance (NMR) instrument etc.

SOCIAL SKILLS & COMPETENCIES

- Good expressing power
- Self- Starter & Team Leading
- Hard-worker

- Optimistic
- Good positive attitude in adverse conditions
- Self-motivating and easily adjustable to any environment
- Able to work under pressurized and flexible circumstances
- Managerial quality and Smart Working
- Making innovative and creative ideas
- Learning and analytical skills

GOVERNMENT PROJECT UNDERTAKEN

- i. Studies on Leather Solid Waste - Polymer Composites for Acoustic Applications, a 3 Years project, Sectioned by SERB (DST) with funding of Rs. 32,97,740 Lakh.
- ii. Studies on Leather solid waste reinforced thermosetting Polymer composites for high strength Structural applications, a 3 years project, Sanctioned by CSIR-Central Leather Research Institute (MLP-33) under Applied Research category with funding of Rs. 5,35,000 Lakh.

PROJECTS COMPLETED

- ❖ **Project:** Maximum utilization of solid wastes and natural fibers which were reinforced as filler in thermosetting hybrid polymer composites for various novel engineering and bio-medical applications.
- ❖ **Project:** Design and development of low cost resin infusion moulding machine for producing good void free composite

sheets with complex irregular geometries for various engineering applications.

- ❖ **Project:** Design and developed a Jet Tester experimental set-up to check the erosion wear & corrosion wear behaviour of coated and uncoated SS304, various metals as well as non-metals at various distinct angles and by varying impact velocities.
- ❖ **Project:** Fabricate an experimental set-up of a single pass cross-flow compact heat exchanger to enhance the Thermo- physical properties, Heat transfer characteristics & pressure drop characteristics by using Aluminium/water & Titanium/water Nanofluid in Automobile diesel engine car radiator & this nanofluid is used as a Nano-coolant by replacing conventional ethylene glycol coolant.
- ❖ **Project:** Fabricate Autonomous Virtual Smart Intelligent Vehicle based upon Dual Tone Multi Frequency (DTMF) Technology.
- ❖ **Project:** Evaluation of mechanical properties, thermal properties, Tribological properties and morphological properties of solid leather buffing dust reinforced polymer composites for engineering and other construction applications. In this project, we develop low-cost environmentally friendly manufacturing process for the conversion of hazardous solid wastes into some useful value-added products and value-added applications. **[Waste-to-Wealth principle].**
- ❖ **Project:** Design and Development of double cam operated multipurpose punch press working prototype machine for various engineering applications.
- ❖ **Project:** Implementation of POKA-YOKE and Time-Study i.e. Tact Time and Cycle Time.

Objective: To achieve zero-error by eliminating all defects and imperfections in the part and to maintain Jig time to time regularly maximise the production and encounter all defects. Time study ensures that if there is variation in part then we find that there is a possibility of increasing the production by using same resources.

Description: In this project we have to apply different Poka-Yoke based upon principles i.e., electrically proximity sensors, Limit switches, Pin cylinder and Pneumatic type Poka-Yoke to the parts. A piece is manufactured by various processes. So the piece will have to go through all that processes. We have fitted different function. We took a Poka-Yoke which sense a presence of a bolt. So, if that Poka -Yoke sense that bolt then that process will occur otherwise that process will not occur. So this technology will help us to achieve our aim of zero error. By time study we examine the actual time taken by operator for completing one cycle. We can increase the production by removing the waste time by doing some modification in the layout of jig. Hence in the same time we increase the production and increase the profit.

❖ **Project:** Control Plan and JBPS.

Objective: To ensure that performance improvements made by the project team are sustained over time. The plan is created during the improve phase of define, measure, analyze, improve, control (DMAIC) approach or a similar phase of other methodologies. JBPS stands for “Jay Bharat Process Standardization”. It is mainly for the operator. It is in the operator understanding language.

Description: The CONTROL PLAN is created during the improve phase of define, measure, analyze, improve, control (DMAIC) approach or a similar phase of other methodologies. The project

team should create the control plan along with the process owner and representation from all areas involved in the process. As the process changes or process knowledge increases and as measurement systems and implementation methods are evaluated and improved, the plan should be updated. JBPS contains number of spots, sequence of spots, weld time, electrode number, hold time and tell about the parts to be joined. We always keep JBPS at par with control plan. It should be always match so that we get good results like spots are in proper sequence, solid safe spot.

INTERNSHIPS

Organisation: Worked as a trainer in Hindustan Hydraulic Pvt. Limited, Jalandhar city, Punjab state for six weeks (20 May-29 June 2013).

Description: I worked there as trainee to study sheet metal operations and various processes for manufacturing of Machine tool operations. Hindustan Hydraulics limited also has its own auto assembly unit so I also got privilege to see that.

CAREER OBJECTIVES

- Aspiring to achieve a challenging, dynamic and responsible position that will both utilize and strengthen the skills acquired during my knowledge development in a high-growth company with considerable advancement opportunities. Want to face and experience new opportunities and to overcome all obstacles and hurdles that come in way.
- I would like to contribute to the welfare of the society by sharing my knowledge and experience with others and also try to be a good citizen.

EXTRA CURRICULAR & WORKSHOPS ATTENDED

- ❖ Awarded as a Merit certificate by securing first position in the event Tech Mahotsav by innovating a Nanofluid as a coolant in car radiator entire set up organised by DAV University.
- ❖ Cleared Chan Oil International Private Limited interview, Singapore M.N.C. for Senior Mechanical engineer vacancy.
- ❖ Cleared an U.E.S (University entrance scheme) interview in an Indian Army.
- ❖ Cleared Sahara India Pariwar written examination and interview for Education professional job.
- ❖ Attended Various International conferences and Seminars organised by National Institute of Technical Teachers Training & Research centre (NITTTR) and Indian Federation of United Nation Association (IFUNA), Institution of Electronics & Telecommunication Engineers (IETE), Centre for Development of Advanced Computing (C-DAC) & Ministry of Human Resource Development of India etc.
- ❖ Attended the International Multi Track Conferences conducted by ISRO, AICTE, PTU & CSOI at CT Group of Institutions.
- ❖ Attended 2nd International conference at Bhai Gurdas Institute of Engineering & Technology conducted by CSIR, HRD Government of India.
- ❖ Attended 3rd National Conference on Engineering Applications- Accelerating Make in India (NCEA- 2017) conducted by St. Soldier Group of Institutions, AICTE, IGKPTU & HRD Government of India.
- ❖ Attended the two national level conference conducted by MIST.

- ❖ Attended the national level conference on “Advances on Computer Science” organised by GNA University.
- ❖ Attended the workshop on automobile manufacturing conducted by MCAR.

AWARDS & HONOURS

- Honoured in the domain of Research & Development (R&D) during COVID19 Pandemic from the **World Book of Records, London (United Kingdom)** as an Excellence & Commitment Awards in the field of Breakthrough Research. [**Reference Number: CC-103837 / Zurich / 13 August 2021**]. [www.worldbookofrecords.uk].
- Recognized and Ranked among the **World’s top 2% scientists listed by prestigious Stanford University and Elsevier**.
- Recently, one of the articles has been received the best article entitled, “Electrostatic atomization minimum quantity lubrication machining: from mechanism to application” award from the prestigious esteemed Journal, **International Journal of Extreme Manufacturing (IOP Science)**.
- Twice Honoured as a **Young Scientist award-2018 & 2017** from International Association of Research and Developed Organization (IARDO) organization as an Excellence Awards ceremony in the field of Research and academics organized by Gurukul Institute of Engineering and technology.
- Nominated and Shortlisted as a **Global Professional and Innovative Research Technologist** from the Society of Innovative Educationalist & Scientific Research Professional Chennai, Accredited with Innovative Scientific Research Professional Malaysia.
- **Twice** Honoured as an **Active Young Researcher award** (2017 & 2018) in the Research and Academics field of core Mechanical and Materials science Engineering from International Journal &

A.R. Research Publications, Conference world etc.

- Twice** Received **Best paper presentation awards** in 5th International Conference on Recent Development in Engineering Science, Humanities and Management held at (NITTTR) National Institute of Technical Teachers Training & Research, Chandigarh, India on 16th April 2017 [ISBN: 978-93- 86171-39-9] and International Conference on Research Developments in Applied Science, Engineering & Management (AEM- 2018) held at The Indian Council of Social Science Research (ICSSR) North West Regional Centre , Punjab University Campus, Chandigarh (India) on 18th March 2018 [ISBN:978-93-87793-07-1].
- Publish twenty two Research papers in various Scientific International reputed Double blind Peer Review Journals like Springer-JTAC (SCI & SCI-E indexed), JMSSE, IJETED, IJCAR, IJESRT, IJRSR, IJATES, IJRAT & IJARSE which are indexed by Science citation indexed (SCI), Elsevier Bibliographic database, Science in (SCI in), Scopus, Federation of Indian Research & Indian Council of Materials Science and Research, Science Indexing, Science Indexing Service, Indian Citation Index (ICI), Web of Science, Thomson Reuters Research ID and Thomson Reuters Endnote, A Division of American Chemical Society (CAS), DOAJ, Sjournals, Research Gate, Mendeley, Scribd, Various international Universities library directories, Google Scholar, Global Series Directory, IDIIF etc & various others international indexing. Further still working on various Mechanical Research Projects, book chapters, patents/copyrights and strive to publish them in up comings well reputed SCI indexed International Journals.
- Publish thirty-three research papers in various international conferences which are organised by **The University of New South Wales, Australia**, SIAM College Technology, Thailand, Hyatt Regency Miami, Miami, FL, USA & other two papers were conducted by ISRO in IMTC and Bhai Gurdas Institute of Engineering & Technology.

- Publish nine Research Papers in various National conference organised by MIST (CTIEMT College), St. Soldier Group of Institutions & GNA University.
- Eight book chapters has also communicated to Springer for publications
- University topper (First position) in 1st semester and 2nd semester during M-TECH at DAV University.
- Awarded as a Merit certificate by securing first position in the event Tech Mahotsav by innovating a nanofluid as a coolant in car radiator entire set up organised by DAV University.
- Best student award in 12th standard in Academics.
- Appreciation first award in Bourn vita Quiz Competition.
- College Topper in 4th semester, 5th semester & 6th semester during B-TECH.
- Punjab Technical University (P.T.U) University topper (fourth position) in 6th semester.
- Cleared a U.E.S (University entrance scheme) interview in an Indian Army.
- Awarded as merit certificates from University & College in B-Tech (ME) & M-Tech (ME).

MEMBERSHIPS & SOCIETIES

- I am a lifetime member of an International association of Engineers (I.A.E.N.G.): Society of Mechanical Engineering with member number 221729.

- I am a lifetime member of an **Honorary Rosalind Member of London Journals Press (UNITED KINGDOM)** with membership ID #**TR00445**.
- I am Fellow member of Institute of Research Engineers & Doctors (I.O.S.R.D.) with Editorial Member (I.R.E.D.) ID: SM10100060656.
- I am Fellow member of a Universal Association of Mechanical and Aeronautical Engineers (U.A.M.A.E.) with Editorial Member ID: SM10100060656.
- I am a lifetime member of Mechanical International Association of Educators and Researchers (M.I.A.E.R.) with member number 180931.
- I am lifetime Senior member of Asian Society of Researchers (A.S.R.) with ASR Senior Member Number R218111802. R413333709
- I am lifetime member of International Organization of Scientific Research & Development (I.O.S.R.D.) with Editorial Member (E.I.O.S.R.D.) ID: E201812023. E341813041
- I am an Editorial Board member of Insights: Engineering & Technology Journal of Pisco-Med Publishers, Singapore.
- I am an Editorial Board member of American Journal of Mechanical and Materials Engineering (AJMME-Science Publishing Group Inc.), New York, USA.
- I am an Editorial Board member of Condensed Matter Physics Report of Whioce Publishers, Singapore.
- I am an Editorial Board member of International Journal of Engineering and Manufacturing Science (IJEMS), Research India Publishers, India.

- I am an Editorial & Scientific **Board member of** Technium Science Journals.
- I am an Editorial Board member of Journal of Polymer Science and Engineering, EnPress Publisher Editorial Office from USA.
- I am an Editorial Board member of Institute for engineering research and publication (I.F.E.R.P.) Journals.
- I am an Editorial Board member of International Journal of Advances in Applied Sciences.
- I am an Editorial Board member of Journal of World Architecture, BIQ-Byword (B.B.W.) Publisher from Australia.

PATENTS & COPYRIGHT FILLED

We fabricated two experimental set-ups one for checking thermo- physical properties & heat transfer characteristics through single pass cross flow compact heat exchanger. This above-mentioned set-up fabricated by me and one of my team members will get copyright certificate from DAV University in a Tech Mahotsav event. Other set- up fabricated was Virtual Intelligent vehicle (VIVE) based upon DTMF Technology. Now we have filled a patent for VIVE. Hopefully after sometime we will get Patent number. But otherwise, you can see our fabricated set-up in the following link:

http://m.facebbok.com/story.php?story_fbid=1498105516877500&s_ubstory_index=0&id+245766365444761

S.No.	International Patent Application number	Invention name	Applicant affiliations	Inventor details
1	<p>TS202201ZA</p> <p>2022/01299</p> <p>PATENT GRANTED</p> <p>(REPUBLIC OF SOUTH AFRICA</p> <p>Reference No. PT221298ZA)</p> <p>Patent Grant date: 30th March 2022</p>	Ceramic tile crushing and dismantling system based on ultrasonic vibration	<p>Qingdao University of Technology, Hanergy (Qingdao) Lubrication Technology Co., Ltd., IK GUJRAL PUNJAB TECHNICAL UNIVERSITY</p>	<p>Zhang Zechen, Li C, Zhou Zongming, Shubham Sharma, Hou Yali</p>

<p>2</p>	<p>US 11,753,242 B2 US011753242B2</p> <p>US PATENTS</p> <p>Appl. No.: 17/568,429</p> <p>PATENT GRANTED</p> <p>Appl. No.: 17/568,429</p> <p>Filed: Jan. 4, 2022</p> <p>Prior Publication Data</p> <p>US 2023/0143983 A1 May 11, 2023</p> <p>Foreign Application Priority Data</p> <p>Nov. 10, 2021 (CN) 202111326732.6</p>	<p>LOADING EQUIPMENT AND CONVEYING SYSTEM FOR TANK TRACK MOVING SUPPORT</p>	<p>Qingdao University of Technology, Qingdao (CN); Qingdao Cabos Intelligent Manufacturin g Co., Ltd, Qingdao (CN); IK Gujral Punjab Technical University, Shubham Sharma, Jalandhar (IN)</p>	<p>Minkai Chen, Qingdao (CN); Changhe Li, Qingdao (CN); Aiguo Qin, Qingdao (CN); Shubham Sharma, Jalandhar (IN); Hanqi Fan, Qingdao (CN); Zongming Zhou, Qingdao (CN); Min Li, Qingdao (CN); Juntong Li, Qingdao (CN); Tao Jiang, Qingdao (CN); Xufeng Zhao, Qingdao (CN)</p>
----------	---	---	---	---

<p>3</p>	<p>US 11,829,421 US17829421</p> <p>US PATENTS</p> <p>Appl. No.: 17/829,421</p> <p>PATENT GRANTED</p> <p>Appl. No.: 17/829,421</p> <p>Filed: 2022-06-01</p> <p>Plan No.: PCPIP202209US</p> <p>Announcement date: 2023-09-12</p> <p>Announcement No.: US11752584B2</p> <p>Prior Publication Data</p> <p>US 2023/0031445 A1</p> <p>Feb. 2, 2023</p> <p>Foreign Application Priority Data</p> <p>Jul. 29, 2021 (CN)</p>	<p>A fully automatic wheel hub loading and unloading system for the intelligent automobile wheel hub production line/FULL-AUTOMATIC WHEEL HUB FEEDING-BLANKING SYSTEM FOR INTELLIGENT PRODUCTION LINE OF AUTOMOTIVE WHEEL HUBS</p>	<p>Qingdao University of Technology; IK Gujral Punjab Technical University.</p>	<p>Li Changhe, Liu Dewei, Zhou Zongming, Zhang Naiqing, Liu Bo, Shubham Sharma, Ding Wenfeng, Zhang Zechen</p>
----------	---	--	---	--

<p>4</p>	<p>TS202207ZA</p> <p>2022/01305</p> <p>PATENT GRANTED</p> <p>(REPUBLIC OF SOUTH AFRICA</p> <p>Reference No. PT221298ZA)</p> <p>Patent Grant date: 30th March 2022</p>	<p>The agricultural machinery equipment and method for the integration of fine seed fertilizer and shallow buried drip irrigation pipe laying and film mulching</p>	<p>Qingdao University of Technology, Guangzhou University, IK GUJRAL PUNJAB TECHNICAL UNIVERSITY</p>	<p>Lu Yue, Li C, Liu Xiaochu, Shubham Sharma, Hou Yali</p>
<p>5</p>	<p>TS202208ZA</p> <p>2022/01306</p> <p>PATENT GRANTED</p> <p>(REPUBLIC OF SOUTH AFRICA</p> <p>Reference No. PT221298ZA)</p> <p>Patent Grant date: 30th March 2022</p>	<p>The invention relates to an electronic scale an automatic weighing packaging coding system and a Working method thereof</p>	<p>Qingdao University of Technology, IK GUJRAL PUNJAB TECHNICAL UNIVERSITY</p>	<p>Shi Zhuang, Li C, Shubham Sharma, Hou Yali</p>

6	<p>TS202209ZA</p> <p>2022/01307</p> <p>PATENT GRANTED</p> <p>(REPUBLIC OF SOUTH</p>	<p>An intelligent processing system and method for resource reuse of animal feces</p>	<p>Qingdao University of Technology, IK GUJRAL PUNJAB TECHNICAL UNIVERSITY</p>	<p>Ma Hao, Li C, Shubham Sharma, Hou Yali</p>
	<p>AFRICA</p> <p>Reference No. PT221298ZA)</p> <p>Patent Grant date: 30th March 2022</p>			
7	<p>TS202213ZA</p> <p>2022/01310</p> <p>PATENT GRANTED</p> <p>(REPUBLIC OF SOUTH AFRICA</p> <p>Reference No. PT221298ZA)</p> <p>Patent Grant date: 30th March 2022</p>	<p>An eccentric wheel connecting rod punching and Separating device for auxiliary seed potato cutting Tuber</p>	<p>Qingdao University of Technology, Liaoning University of Technology, IK GUJRAL PUNJAB TECHNICAL UNIVERSITY</p>	<p>Wang Yili, Li C, Jia Dongz hou, Shubham Sharma, Hou Yali</p>

8	TS202217ZA 2022/01315 PATENT	A self-arranging knife cutting device and working method for root crops	Qingdao University of Technology, Inner	Xu Wenhao, Hou Yali, Z hao Huayang, Shubham Sharma
	GRANTED (REPUBLIC OF SOUTH AFRICA Reference No. PT221298ZA) Patent Grant date: 30th March 2022		IK GUJRAL PUNJAB TECHNICAL UNIVERSITY	
9	Under Investigation	Design of a mechanism for the automatic shutdown of I.C. Engine during irrigation applications.	IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, King Mongkut's University of Technology	Gursharan Singh, Vi neet Kumar, Shubham Sharma, Nidhi Gautam, Jujhar Singh, Chan ghe Li, MR Sanjay,

10	Under Investigation	Design and Development of EMF setup for GMA welding machine and optimization of EMF for welding of Mg alloys (AZ31B).	IK GU JRAL PUNJAB TECHNICAL UNIVERSITY, King Mongkut's University (KMUTNB)	Pankaj Sharma, S. Chattopadhyaya, NK Singh, Shubham Sharma,
				Singh, Changhe Li, MR Sanjay, and Siengc hin
11	<p>British Patent (UK Patent)</p> <p>Plan number:</p> <p>PCPIP2021167GB</p> <p>Patent application number:</p> <p>GB2118981.6</p> <p>Announcement number:</p> <p>GB2606799</p>	Positioning system with adjustable clamping force and milling equipment for rail transit honeycomb workpiece.	Qingdao University of Technology, IK GUJRAL PUNJAB TECHNICAL UNIVERSITY	Li Changhe, Shi Zhuang, Shubham Sharma, Gao Teng, Zhang Yanbin, Yang Min, Liu Mingzheng, Wang Xiaoming

12	<p>Australia Government IP Australia (UK Patent)</p> <p><u>Priority details:</u></p> <p>Number: 2021114227468</p> <p>Date: 26 November 2021</p> <p>Patent application number: AU2022201185</p> <p>Plan number: PCPIP2021172AU</p> <p>Announced Date: 31/08/2023</p>	<p>MULTI-ENERGY FIELD NANO-LUBRICANT MICRO-SCALE BONE GRINDING PROCESSING MEASURING SYSTEM.</p>	<p>QINGDAO UNIVERSITY OF TECHNOLOG Y of No.777, Jialingjiang Road, Economic and Technological Development Zone Qingdao Shandong 266520 China IK GUJRAL PUNJAB TECHNICAL UNIVERSITY of Main Campus- Kapurthala Jalandhar 144603 India.</p>	<p>YANG, Yuying; LI, Changhe; ZHOU, Zongming; SHARMA, Shubham; YANG, Min; ZHANG, Yanbin; CUI, Xin and ZHANG, Zechen</p>
----	--	---	---	---

13	<p style="text-align: center;">Indian Patent (IPH)</p> <p style="text-align: center;">Number: 202311063921 A</p> <p style="text-align: center;">Filing Date: 29/09/2023</p> <p style="text-align: center;">Patent application number: 202311063921 A</p> <p style="text-align: center;">Publication Date: 13/10/2023</p>	<p>A ROAD SAFETY SYSTEM FOR HEAVY VEHICLES</p>	<p>GRD Institute of Management and Technology; University Centre for Research and Development (UCRD), Chandigarh University.</p>	<p>TRIPATHI, VARUN; SHARMA, Shubham</p>
----	---	--	--	---

14	<p>Australia Government IP Australia</p> <p>Patent application number: AU2022201195A1</p> <p>Announced Date: February 2022</p>	<p>Multi-energy field driven electrostatically atomized minimal quantity lubricant conveying device.</p>	<p>QINGDAO UNIVERSITY OF TECHNOLOG Y. IK GUJRAL PUNJAB TECHNICAL UNIVERSITY of Main Campus- Kapurthala Jalandhar 144603 India.</p>	<p>M. Yang, H. Ma, Y.Y. Yang, C.H. Li, Z.M. Zhou, Shubham Sharma</p>
----	---	--	--	--

LANGUAGES KNOWN

English, Hindi, Punjabi, Himachali (Pahari)

HOBBIES

Reading literature in current research and review papers,

Doing literature survey, Finding research gaps, Gathering knowledge on current trends and developments in science and technology, fiction novels (Sherlock Holmes series), going Gym for daily workout, listening to music, playing and watching cricket, watching Hollywood and Bollywood movies, to play with pets, gathering knowledge about new industrial and Engineering technology, planting trees.

CURRENT ANNUAL C.T.C.

My current annual salary is 1246000 INR including all perks.

EXPECTED ANNUAL C.T.C.

Salary is not a big issue, particularly for me. My expected salary is something which fulfils my basic and social needs and moreover where I'll work independently with good research working environment.

REFERRES

1. Dr. Jujhar Singh, Department of Mechanical Engg., IK Gujral Punjab Technical University, Main Campus-Kapurthala, Punjab, India. Email: jujharsingh2085@gmail.com; dr.jujharsingh@ptu.ac.in
2. Prof. Dr. Somnath Chattopadhyaya, Associate Professor, Department of Mechanical Engineering, Professor in Charge- Online and Continuing Education Program (OCEP), Steering & Executive committee Member- Heritage Network of Indo- European Institutions of Higher Education. Indian Institute of Technology (Indian School of Mines), Dhanbad - 826004, Email Address: somnathchattopadhyaya@iitism.ac.in; somuismu@gmail.com
3. Dr. M.R. Sanjay, Senior Research Scientist (Specialist 3), Advisor within

the office of the President for University Promotion and Development
towards International goals, Natural
Composites Research Group Lab, AED, Materials and Production
Engineering,

TGGS, King Mongkut's University of Technology North Bangkok (KMU
TNB), Thailand.

Email: mavinkere.r.s@op.kmutnb.ac.th; mcemrs@gmail.com

4. Prof. Dr. Jasgurpreet Singh Chohan, Department of Mechanical
Engineering, CEO-TBI, Chandigarh University, Mohali, Punjab, India.

Email: jaskhera@gmail.com; jasgurpreet.me@cumail.in

5. Prof. Dr. Raman Kumar, Department of Mechanical Engineering, UCRD,
Chandigarh University, Mohali, Punjab, India. Email:

ramankakkar@gmail.com

PERSONAL DETAILS

Mother's Name: Mrs. Sonia Sharma Father's

Name: Mr. Kuldip Chand Shastri

Date of Birth: 23-11-1993

Gender: Male

I hereby declare that all the information stated above is true to best of my
knowledge and belief. I take the responsibility of any mistakes in data if
occur in future.

Place: Jalandhar

Dr. Shubham Sharma

RECENT SELECTED LIST OF PUBLICATIONS

SCIENTIFIC INTERNATIONAL JOURNALS

1. Amoljit Singh Gill, Sanjeev Kumar, Jujhar Singh, Vivek Agarwal, Shubham Sharma, "A Review of Recent Methods for Tool Wear Reduction in Electrical Discharge Machining", 2020, Surface Review and Letters (SRL)-World Scientific Publishers, <https://doi.org/10.1142/S0218625X20300026>.
2. S Sharma, AJ Obaid, "Recent trends and development of Heuristic Artificial Intelligence approach in Mechanical system and engineering product Design", 2020, Saudi Journal of Engineering and Technology, DOI: 10.36348/sjet.2020.v05i02.008.
3. Shubham Sharma, P. Sudhakara, Jujhar Singh, Sunpreet Singh, Gurminder Singh. Emerging progressive developments in the fibrous composites for acoustic applications. 2023. Journal of Manufacturing Processes (ELSEVIER). Volume 102, 29 September 2023, Pages 443-477. <https://doi.org/10.1016/j.jmapro.2023.07.053>.
4. Saraswathi Kailasa, B Geeta Rani, M Sai Bhargava Reddy, N Jayarambabu, P Munindra, Shubham Sharma, KV Rao "NiO nanoparticles-decorated conductive polyaniline nanosheets for amperometric glucose biosensor" Materials Chemistry and Physics, Volume 242, 15 February 2020, 122524. [\[https://doi.org/10.1016/j.matchemphys.2019.122524\]](https://doi.org/10.1016/j.matchemphys.2019.122524)
5. S Sharma, P Sudhakara, M Petru, J Singh, S Rajkumar. Effect of nano-additives on the novel leather fiber/recycled Poly (Ethylene-vinyl-acetate) polymer composites for multi-functional applications: Fabrication, characterizations, and multi-objective optimization using Central Composite Design. Nanotechnology Reviews (De Gruyter). 2022. <https://doi.org/10.1515/ntrev-2022-0361>.
6. Kong, M., Changhe Li, Yunze long, Yanbin Zhang, Shubham Sharma, Runze Li et al., Temperature field model in surface grinding: A comparative

assessment. International Journal of Extreme Manufacturing. 2023. in press. <https://doi.org/10.1088/2631-7990/acf4d4>.

7. S. Sharma. State of art on the hydrogel's biomaterials derived from natural-polysaccharides and Polysaccharide-based grafted copolymers: Developments, Characterizations, and Multifaceted applications. Materials Today (Elsevier). 2022. **[Article under review]**.
8. Sharma S, Verma A, Rangappa SM, Siengchin S, Ogata S, Recent progressive developments in conductive-fillers based polymer nanocomposites (CFPNC's) and conducting polymeric nanocomposites (CPNC's) for multifaceted sensing applications, Journal of Materials Research and Technology, S2238-7854(23)02112-9, <https://doi.org/10.1016/j.jmrt.2023.08.300>.
<https://www.sciencedirect.com/science/article/pii/S2238785423021129>.
9. Xiufang Bai, Juan Jiang, Changhe Li, Lan Dong, Hafz Muhammad Ali, and Shubham Sharma. Tribological Performance of Different Concentrations of Al₂O₃ Nanofuids on Minimum Quantity Lubrication Milling. Chinese Journal of Mechanical Engineering (2023) 36:11. <https://doi.org/10.1186/s10033-022-00830-0>.
10. Shashi Prakash Dwivedi, Shubham Sharma, Changhe Li, Yanbin Zhang, Abhinav Kumar, Rajesh Singh, Sayed M. Eldin, Mohamed Abbas. Effect of Nano-TiO₂ Particles Addition on Dissimilar AA2024 and AA2014 Based Composite Developed by Friction Stir process technique. Journal of Materials Research and Technology, 2023. Volume 26, September–October 2023, Pages 1872-1881. <https://doi.org/10.1016/j.jmrt.2023.07.234>.
11. Wei, Haoran & Ge, Haohui & Zhao, Tingting & Sharma, Shubham & Petru, Michal & Dwivedi, Shashi & Kumar, Abhinav & Abbas, Mohamed. (2023). Vanadium dioxide thin films-assisted terahertz meta-surface for simultaneous absorption, polarization conversion bi-functional switching, and wavefront operation. Results in Physics. 106970. [10.1016/j.rinp.2023.106970](https://doi.org/10.1016/j.rinp.2023.106970).
12. Sandeep Kumar, Rakesh Dang, Alakesh Manna, Shubham Sharma, Shashi Prakash Dwivedi, Abhinav Kumar, Changhe Li, Mohamed Abbas.

Effect of chemically treated kenaf fiber on the mechanical, morphological, and microstructural characteristics of PLA based sustainable bio-composites fabricated via direct injection molding route. *Biomass Conversion and Biorefinery*, 2023. <https://doi.org/10.1007/s13399-023-04916-0>.

13. Kumar, Sandeep, Rakesh Dang, Alakesh Manna, Nishant Kumar Dhiman, Shubham Sharma, Shashi Prakash Dwivedi, Abhinav Kumar, Changhe Li, Elsayed M. Tag-Eldin, and Mohamed Abbas. "Optimization of Chemical Treatment Process Parameters for Enhancement of Mechanical Properties of Kenaf Fiber-Reinforced Polylactic Acid Composites: A comparative study of mechanical, morphological and microstructural analysis." *Journal of Materials Research and Technology*, Volume 26, September–October 2023, Pages 8366-8387. <https://doi.org/10.1016/j.jmrt.2023.09.157>.
14. Banerjee, Abhranil, Kanishka Jha, Michal Petru, Rajeev Kumar, Shubham Sharma, Mandeep Singh Saini, Kahtan A. Mohammed, Abhinav Kumar, Mohamed Abbas, and Elsayed M. Tag-Eldin. "Fabrication and Characterization of weld attributes in Hot Gas welding of Alkali treated hybrid Flax Fiber and Pine Cone Fibers reinforced Poly-lactic Acid (PLA) based Biodegradable Polymer Composites: Studies on Mechanical and Morphological properties." *Journal of Materials Research and Technology* (2023). <https://doi.org/10.1016/j.jmrt.2023.09.252>.
15. Kumar, Raman, Arvinder Singh Channi, Rupinder Kaur, Shubham Sharma, Jasmaninder Singh Grewal, Sehijpal Singh, Amit Verma, and Rodolfo Haber. "Exploring the Intricacies of Machine Learning-Based Optimization of Electric Discharge Machining on Squeeze Cast TiB₂/AA6061 Composites: Insights from Morphological, and Microstructural aspects in the Surface Structure Analysis of Recast Layer Formation and Worn-Out Analysis." *Journal of Materials Research and Technology* (2023). Volume 26, September–October 2023, Pages 8569-8603. <https://doi.org/10.1016/j.jmrt.2023.09.127>.
16. Rajeev Kumar, Shubham Sharma, Jaiinder Preet Singh, Piyush Gulati, Gursharan Singh, Shashi Prakash Dwivedi, Changhe Li, Abhinav Kumar, Elsayed M Tag-Eldin, Mohamed Abbas. Enhancement in wear-resistance

of 30MNCRB5 Boron steel-substrate using HVOF thermal sprayed WC-10%Co-4%Cr coatings: A comprehensive research on microstructural, tribological, and morphological analysis. *Journal of Materials Research and Technology* (2023). <https://doi.org/10.1016/j.jmrt.2023.09.265>.

17. Shashi Prakash Dwivedi, Shubham Sharma. "Effect of CeO₂-Ni Addition on the Behavior of AZ91-A356 based Composite fabricated by Friction solid state Technique". *Materials Chemistry and Physics* (2023). Volume 311, 1 January 2024, 128551. <https://doi.org/10.1016/j.matchemphys.2023.128551>.
18. Kumar, Abhinav, Halan Ganesan, Vishnu Saini, Hamad Almujiabah, Petros Petrounias, JV Muruga Lal Jeyan, Shubham Sharma, and Ashish Agrawal. "An assessment of photovoltaic module degradation for life expectancy: A comprehensive review." *Engineering Failure Analysis* (2023): 107863. <https://doi.org/10.1016/j.engfailanal.2023.107863>.
19. Kumar, Ravinder, V. Lalnundiki, Sagar D. Shelare, Galla John Abhishek, Shubham Sharma, Deepti Sharma, Abhinav Kumar, and Mohamed Abbas. "An investigation of the environmental implications of bioplastics: Recent advancements on the development of environmentally friendly bioplastics solutions." *Environmental Research* (2023): 117707. <https://doi.org/10.1016/j.envres.2023.117707>.
20. Gong, Peng, Yanbin Zhang, Chunjin Wang, Xin Cui, Runze Li, Shubham Sharma, Mingzheng Liu et al. "Residual Stress Generation in Grinding: Mechanism and Modeling." *Journal of Materials Processing Technology* (2023): 118262. <https://doi.org/10.1016/j.jmatprotec.2023.118262>.
21. Kumar, Rajeev & Sharma, Shubham & Kumar, Abhinav & Mohammed, Kahtan. (2023). Novel study on investigating the Mechanical, Microstructure Morphological, and Dry Sliding Wear Characteristics of Grey Cast Iron GG25 with Copper additions for Valve Guides in Internal Combustion Engine. *Frontiers in Materials*. 10. 1293254. [10.3389/fmats.2023.1293254](https://doi.org/10.3389/fmats.2023.1293254).
22. Chopra, Lalita & Sharma, Anika & Chohan, Jasgurpreet & Upadhyay, Viyat & Singh, Rajesh & Sharma, Shubham & Dwivedi, Shashi & Kumar, Abhinav & Tag-Eldin, Elsayed. (2023). Synthesis and characterizations of

- super adsorbent hydrogel based on biopolymer, Guar Gum-grafted-Poly (hydroxyethyl methacrylate) (Gg-g-Poly (HEMA)) for the removal of Bismarck brown Y dye from aqueous solution. *International Journal of Biological Macromolecules*. 2023. 256. 128518. [10.1016/j.ijbiomac.2023.128518](https://doi.org/10.1016/j.ijbiomac.2023.128518).
<https://doi.org/10.1016/j.ijbiomac.2023.128518>.
23. V Pandey, O Prakash, A Ahmad, B Das, Shubham Sharma, Fuad A. Awwad, M. Ijaz Khan, Emad A. A. Ismail. Enhancing Solar Parabolic Trough Collector Efficiency with Al₂O₃ and Therminol VP-1 Nanofluids. 2023. *Energy Exploration & Exploitation* (SAGE). 10.1177/01445987231220062.
24. Sumit Kanchan, Manisha Priyadarshini, Prem Kumar, Rajesh Choudhary, Swastik Pradhan, Rajeev Kumar, Shubham Sharma, Fuad Awwad, M. Khan, Emad Ismail. Multi-objective statistical optimisation utilising Response Surface Methodology to predict Engine Performance using Biofuels from Waste Plastic Oil on CRDi engines. 2023. *Green Processing and Synthesis* (DE GRUYTER). 10.1515/gps-2023-0159.
25. Dwivedi, Shashi Prakash, and Shubham Sharma. "Effect of Ni addition on the behavior of dissimilar A356-AZ91/CeO₂ aluminum-magnesium based composite fabricated by friction stir process technique." *Composite Interfaces* (2023): 1-26. <https://doi.org/10.1080/09276440.2023.2260236>.
26. Li, C., Zhang, Y. & Sharma, S. Enhanced Heat Transfer Technology Based on Emission Reduction and Carbon Reduction in Cutting and Grinding. *Chin. J. Mech. Eng.* 36, 112 (2023). <https://doi.org/10.1186/s10033-023-00947-w>.
27. Dwivedi, Shashi Prakash, and Shubham Sharma. Development and Characterization of Cu-Ni- Al₂O₃ Surface Composite Developed by Friction Stir Process. *Materials Today Communications* (2023). <https://doi.org/10.1016/j.mtcomm.2023.107399>.
28. Kahtan A. Mohammed, R. A. Talib, Sameer Algburi, Ali Kareem, B. Bhavani, Mohammed Ayad Alkhafaji, Rahman S. Zabibah, Forat H. Alsultany, Shubham Sharma. Synthesis PEO/PS/PMMA/Se as new

nanocomposite with porous morphology. *Chalcogenide Letters*, 2023, 20(11). Volume 20, Number 12, December 2023. <https://doi.org/10.15251/CL.2023.2012.863>.

29. Kahtan A. Mohammed, Ali Kareem, Mohammed Ayad Alkhafaji, Rahman S. Zabibah, Forat H. Alsultany, Shubham Sharma, Rajeev Kumar, Rajesh Singh, Abhinav Kumar, Mohamed Abbas. Impact of precursor type on physical, morphological, microstructural, and optical properties of CdZnS nanoparticles for photodegradation applications, 2023. *Journal of Materials Science: Materials in Electronics (JMSE)*. *J Mater Sci: Mater Electron* 34, 1932 (2023). <https://doi.org/10.1007/s10854-023-11320-x>.
30. Shahbaz Juneja, Jasgurpreet Singh Chohan, Raman Kumar, Shubham Sharma, R.A. Ilyas, MRM Asyraf, M. R. Razman. Impact of process variables of acetone vapor jet drilling on surface roughness and circularity of 3D Printed ABS Parts: Fabrication and studies on thermal, morphological and chemical characterizations. *Polymers* 2022, 14(7), 1367; <https://doi.org/10.3390/polym14071367>.
31. Dwivedi, Shashi Prakash, and Shubham Sharma. Synthesis of High Entropy Alloy AlCoCrFeNiCuSn Reinforced AlSi7Mg0.3 Based Composites developed by Solid State technique. 2023. *Materials Letters*. **[ARTICLE IN PRESS]**.
32. Shubham Sharma, Shashi Prakash Dwivedi, Changhe Li, Fuad A. Awwad, M. Ijaz Khan, Emad A. A. Ismail. Unveiling of Grain structure, Porosity, Phase distributions, Microstructural Morphology, Surface Hardness, and Tribo-Corrosion characteristics of Nickel, and Titanium dioxide-based SS-304 steel Microwave Composite Coatings Cladding. *Journal of Materials Research and Technology*. 2023. **[ARTICLE IN PRESS]**.
33. Khalid Haneen Abass, Noor Haider Obaid, Ashraq Mohammed Kadim, Kahtan A. Mohammed, Rahamn S. Zabiba, Mohammed Ayad Alkhafaji, Shubham Sharma, Abhinav Kumar, Mohamed Abbas. Novel Preparation of Sb₂O₃: Ag/Si Solar Cell fabricated utilising Thermal Evaporation Method: Studies on Structural, Morphology Microstructural, Topographic imaging, Optical, and Electrical properties for Photovoltaic Cell based electronic device applications. *Applied Physics A*. 2023. **[ARTICLE IN PRESS]**.

34. Mohd Ahtesham Hussain Siddiqui, Shahzad Akhtar, Somnath Chattopadhyaya, Shubham Sharma, Abhinav Kumar, Mohamed Abbas. 611 Universal Drilling Machine reliability modeling and performance evaluation in subterranean coal mines. *Rock Mechanics and Rock Engineering*. 2023. **[ARTICLE IN PRESS]**.
35. PRAKASH, OM; NAYAN, PRANAV; AHMAD, ASIM; MAWIRE, ASHMORE; CHATTERJEE, RAJESHWARI; Sharma, Shubham; KUMAR, ABHINAV; Awwad, Fuad A.; Khan, M. Ijaz; Ismail, Emad A. A. Assessing Energy Performance and Payback Period of Residential Building Retrofits in a Smart City: A Case Study. *Energy Exploration & Exploitation*, 2023. **[Article in Press]**. <https://doi.org/10.1177/01445987231212509>.
36. Ravinder Kumar, Rayan Abdul Gafoor, Pallav Rajkhowa, Chirag Chandrayes Shetty, Shubham Sharma, Shashi Prakash Dwivedi, Abhinav Kumar, Mohamed Abbas. Design, modelling and simulation of biocompatible poly methyl methacrylate polymer-based inside-mouth support for microphone using finite element analysis in ANSYS workbench software. *International Journal for Interactive Design and Manufacturing*. 2023. 10.1007/s12008-023-01653-6.
37. KUMAR, RAVINDER; Sharma, Shubham; KUMAR, ABHINAV; SINGH, RAJESH; Awwad, Fuad A.; Khan, M. Ijaz; ISMAIL, EMAD. Sustainable Energy Recovery from Municipal Solid Wastes: An In-depth Analysis of Waste-to-Energy Technologies and Their Environmental Implications in India. *Energy Exploration & Exploitation*, 2023. **[Article in Press]**. <https://doi.org/10.1177/01445987231210323>.
38. BALWANT SINGH; RAMAN KUMAR; JASGURPREET SINGH CHOCHAN; Shubham Sharma; Ahmed Hussien Alawadi; SAURABH AGGARWAL; ABHINAV KUMAR; Fuad A. Awwad; M. IJAZ KHAN; EMAD AA ISMAIL. Unveiling of Mechanical, Thermal, Morphological, and Electrical characteristics for 3D Printed Copper reinforced Acrylonitrile Butadiene Styrene (ABS) polymer composites fabricated by twin-screw extruder. *Open Physics (De Gruyter)*, 2023. **[Article in Press]**.

39. Shashi Prakash Dwivedi, Shubham Sharma, Arun Pratap Srivastava, Vandana Arora Sethi, Kahtan A. Mohammed, Abhinav Kumar, M. Ijaz Khan, Mohamed Abbas, Elsayed M Tag-Eldin. Homogeneity, metallurgical, mechanical, wear, and corrosion behavior of Ni and B4C coatings deposited on 304 stainless steels developed by microwave cladding technique. *Journal of Materials Research and Technology*, 2023. <https://doi.org/10.1016/j.jmrt.2023.10.202>.
40. Jingang Sun, Changhe Li, Zongming Zhou, Bo Liu, Yanbin Zhang, Min Yang, Teng Gao, Mingzheng Liu, Xin Cui, Benkai Li, Runze Li, Yusuf Suleiman Dambatta, Shubham Sharma. Material Removal Mechanism and Force Modeling in Ultrasonic Vibration-Assisted Micro-Grinding Biological Bone. *Chin. J. Mech. Eng.* 36, 129 (2023). <https://doi.org/10.1186/s10033-023-00957-8>.
41. Huang, Zhihang & Li, Chang & Zhou, Zongming & Liu, Bo & Zhang, Y B & Min, Yang & Gao, Teng & Liu, Mingzheng & Zhang, Naiqing & Sharma, Shubham & Dambatta, Yusuf & Li, Yongsheng. (2023). Magnetic Bearing: Structure, Model and Control strategy. *The International Journal of Advanced Manufacturing Technology*. 2023, <https://doi.org/10.1007/s00170-023-12389-8>.
42. Sumit Kanchan, Swastik Pradhan, Rajeev Kumar, Shubham Sharma, Omang Bhandari, Manisha Priyadarshini, Shashi Prakash Dwivedi, Fuad A. Awwad, M. Ijaz Khan, Emad A. A. Ismail, Renu Dhiman. Developing a model for waste plastic biofuels in CRDi diesel engines using FTIR, GCMS, and WASPAS synchronizations for engine analysis. *Energy Exploration & Exploitation*, 2023. DOI: 10.1177/01445987231216762/ ID: EEA-23-0429.R1.
43. Balwant Singh; Raman Kumar; Jasgurpreet Singh Chohan; Shubham Sharma; Ahmed Hussien Alawadi; Saurabh Aggarwal; Abhinav Kumar; Fuad A. A. Awwad; M. Ijaz Khan; Emad A. A. Ismail. Characterizations of 3D Printed Copper reinforced ABS polymer composites fabricated by twin-screw extruder. *Open Physics (DE GRUYTER)*. 2023. 10.1515/phys-2023-0149. **[ARTICLE IN PRESS]**.

44. Dwivedi, Shashi Prakash, and Shubham Sharma. "Synthesis of high entropy alloy AlCoCrFeNiCuSn reinforced AlSi7Mg0.3 based composite developed by solid state technique." *Materials Letters* 355 (2024): 135556. <https://doi.org/10.1016/j.matlet.2023.135556>.
45. Paswan, Kamlesh, Shubham Sharma, Shashi Prakash Dwivedi, Maha Khalid Abdulameer, Changhe Li, Yaser Yasin, Mohamed Abbas, and Elsayed M. Tag-Eldin. "An analysis of microstructural morphology, surface topography, surface integrity, recast layer, and machining performance of graphene nanosheets on Inconel 718 superalloy: Investigating the impact on EDM characteristics, surface characterizations, and optimization." *Journal of Materials Research and Technology* (2023). Volume 27, November–December 2023, Pages 7138-7158. <https://doi.org/10.1016/j.jmrt.2023.11.080>.
46. Paswan, Kamlesh, Shubham Sharma, Changhe Li, Kahtan A. Mohammed, Abhinav Kumar, Mohamed Abbas, and Elsayed M. Tag-Eldin. "Unravelling the analysis of electrical discharge machining process parameters, microstructural morphology, surface integrity, recast layer formation, and material properties: A comparative study of aluminum, brass, and Inconel 617 materials." *Journal of Materials Research and Technology* (2023). Volume 27, November–December 2023, Pages 7713-7729. <https://doi.org/10.1016/j.jmrt.2023.11.186>.
47. Nandhakumar Dhandapani, Bovas Herbert Bejaxhin, Gajendran Periyaswamy, Narayan Ramanan, Jayaraman Arunprasad, Sivanraju Rajkumar, Shubham Sharma, Gurminder Singh, Fuad A. Awwad, M. Ijaz Khan, Emad A. A. Ismail. Physicomechanical, Morphological, and Tribo-deformation characteristics of lightweight WC/AZ31B Mg-matrix biocomposites. *Journal of Applied Biomaterials & Functional Materials*, 2023. 10.1177/22808000231214359/ ID: JABFM-23-0119.R1 **[Article in Press]**.

48. Vishal Thakur; Rupinder Singh; Ranvijay Kumar; Shubham Sharma; Sunpreet Singh; Changhe Li; Yanbin Zhang; Sayed M. Eldin. Mechanically sustainable and primary recycled thermo-responsive ABS-PLA polymer composites for 4D printing applications: Fabrication and studies. *Reviews on Advanced Materials Science*, 2023. DOI: 10.1515/rams-2023-0149. **[ARTICLE IN PRESS]**.
49. Shuguo HU, Changhe LI, Zongming ZHOU, Bo LIU, Yanbin ZHANG, Min YANG, Benkai LI, Teng GAO, Mingzheng LIU, Xin CUI, Xiaoming WANG, Wenhao XU, Y. S. Dambatta, Runze LI, Shubham SHARMA. Nanoparticle-enhanced coolants in machining: mechanism, application and prospects. *Front. Mech. Eng.* 2023, 18(4): 53. <https://doi.org/10.1007/s11465-023-0769-8>.
50. Kahtan A. Mohammed, Alyaa Abdul Hasan Abdul Kareem, Hawraa K. Judi, Athota Rathan, Sameer Algburi, Mohammed Ayad Alkhafaji, Rahman S. Zabibah, Shubham Sharma. Synthesis and Examination of New PVA-Fe₂O₃-Au Hybrid Composite. *Iranian Journal of Physics Research*, 2023. **[Article in Press]**.
51. Entidhar Jasim Khamees, Inas Ahmed Saeed, Lubna Abdulazeem, Olcay Gençyılmaz, Manoj Kumar Agarwal, Kahtan A. Mohammed, Shubham Sharma. Generation and investigation of Fe₂O₃ nanoparticles' optical properties and antibacterial activity using pulsed laser ablation in deionized water. 2023. *International Journal of Nanoscience* (World Scientific Publishing). <https://doi.org/10.1142/S0219581X23500667>.
52. Malik, F.H., Sweah, Z.J., Mohammed, A.J., Mohammed, K.A., Sharma, S. (2023). Electrical, optical conductivity of pentacene and the effect of adding the extracted dye on the electrical properties of pentacene. *Revue des Composites et des Matériaux Avancés-Journal of Composite and Advanced Materials*, Vol. 33, No. 4, pp. 227-232. <https://doi.org/10.18280/rcma.330403>.
53. Rajkumar, G & Tornabene, Francesco & Kumar, Rajeev & Saravanan, M & Sharma, Shubham & Bovas, A & Bejaxhin, Herbert & Dwivedi, Shashi & Singh, Sunpreet. (2023). Parametric Optimization of Powder-Mixed EDM

of AA2014/Si3N4/Mg/Cenosphere Hybrid Composites Using Fuzzy Logic: Analysis of Mechanical, Machining, Microstructural, and Morphological Characterizations. *Journal of Composites Science*. 7. 380. 10.3390/jcs7090380. <https://doi.org/10.3390/jcs7090380>.

54. S Sharma, AJ Obaid "Analysis and Mathematical modelling of the Kinematic, structural and Dynamic properties of Epicyclic Gear Train using CATIA V5R20 in ANSYS V14 software" *Journal of Interdisciplinary Mathematics* [Paper in Press].

55. Ahmad, Asim, Om Prakash, Shailesh Kumar Sarangi, Prashant Singh Chauhan, Rajeshwari Chatterjee, Shubham Sharma, Raman Kumar, Sayed M. Tag, Abhinav Kumar, Bashir Salah, and et al. 2023. "Thermal and CFD Analyses of Sustainable Heat Storage-Based Passive Greenhouse Dryer Operating in No-Load Condition" *Sustainability* 15, no. 15: 12067. <https://doi.org/10.3390/su151512067>.

56. Lalit Ranakoti, Brijesh Gangil, Pawan Kumar Rajesh, Tej Singh, Shubham Sharma, Changhe Li, R.A. Ilyas, Omar Mahmoud. Effect of surface treatment and fiber loading on the physical, mechanical, sliding wear, and morphological characteristics of tasar silk fiber waste-epoxy composites for multifaceted biomedical and engineering applications: fabrication and characterizations. *Journal of Materials Research and Technology*, Volume 19, July–August 2022, Pages 2863-2876. <https://doi.org/10.1016/j.jmrt.2022.06.024>.

57. Dwivedi, Shashi Prakash, Vijay Chaudhary, and Shubham Sharma. "Effect of the Addition of Waste Glass Powder along with TiC as Reinforcement on Microstructure, Wettability, Mechanical and Tribological Behavior of AZ91D Magnesium Based Alloy." *International Journal of Metalcasting* (2023): 1-14. <https://doi.org/10.1007/s40962-023-01117-3>.

58. Kamlesh Paswan, Alokesh Pramanik, Somnath Chattopadhyaya, Shubham Sharma, Gurminder Singh, Aqib Mashood Khan, Sunpreet

Singh. An Analysis of Machining Response Parameters, Crystalline Structures, and Surface Topography During EDM of Die-Steel Using EDM Oil and Liquid-Based Viscous Dielectrics: A Comparative Analysis of Machining Performance. *Arabian Journal for Science and Engineering*. 2023. DOI: 10.1007/s13369-023-07626-x.

59. Shashi Prakash Dwivedi, S Selvaprasakash, Shubham Sharma, Soni Kumari, Kuldeep K Saxena, Rajesh Goyal, Amjad Iqbal & Faramarz Djavanroodi (2023): Evaluation of various properties for spent alumina catalyst and Si₃N₄ reinforced with PET-based polymer composite, *Mechanics of Advanced Materials and Structures*, DOI: 10.1080/15376494.2023.2249888.
60. Singh, Gurpreet, Shubham Sharma, A. H. Seikh, Changhe Li, Yanbin Zhang, S. Rajkumar, Abhinav Kumar, Rajesh Singh, and Sayed M. Eldin. "A novel study on the influence of graphene-based nanofluid concentrations on the response characteristics and surface-integrity of Hastelloy C-276 during minimum quantity lubrication." *Heliyon* 9, no. 9 (2023). <https://doi.org/10.1016/j.heliyon.2023.e19175>.
61. Varun Tripathi, Somnath Chattopadhyaya, A.K. Mukhopadhyay, Shubham Sharma, Vineet Kumar, Changhe Li, Sunpreet Singh. *Lean, Green, and Smart Manufacturing: An ingenious framework for enhancing the Sustainability of Operations Management on the Shop Floor in Industry 4.0. Part E: Journal of Process Mechanical Engineering (SAGE)*. 2023. **[Article accepted and in Press]**. <http://dx.doi.org/10.1177/09544089231159834>.
62. Shashi Prakash Dwivedi, Ambuj Saxena, Irfan Haider, Shubham Sharma. Effect of Zirconium Diboride addition in Zirconium Dioxide Reinforced Aluminum Based Composite Fabricated by Microwave Sintering Technique. *Part E: Journal of Process Mechanical Engineering (SAGE)*. 2023. <https://doi.org/10.1177/09544089231164272>.
63. Dambatta, Yusuf & Li, Chang & Min, Yang & Beikai, L. & Gao, Teng & Liu, Mingzheng & Cui, Xin & Wang, Xiaoming & Zhang, Y B & Said, Zafar & Sharma, Shubham & Zhou, Zongming. (2023). Grinding with minimum

quantity lubrication: a comparative assessment. *Int J Adv Manuf Technol* 128, 955–1014 (2023). <https://doi.org/10.1007/s00170-023-11962-5>.

64. Balaji S, Dharani Kumar S, Magarajan U, RameshBabu S, Ganeshkumar S, Sharma S, Abdelmohsen SAM, Saha I, Eldin SM. Comparative analysis of experimental and numerical investigation on multiple projectile impact of AA5083 friction stir welded targets. *PLoS One*. 2023 Jul 27;18(7):e0285254. doi: 10.1371/journal.pone.0285254. PMID: 37498917; PMCID: PMC10374147. <https://doi.org/10.1371/journal.pone.0285254>
65. Orbak, Âli Yurdun, Metin Küçük, Mehmet Akansel, Shubham Sharma, Changhe Li, Raman Kumar, Sunpreet Singh, and Gianpaolo Di Bona. 2023. "Mathematical Model Assisted Six-Sigma Approach for Reducing the Logistics Costs of a Pipe Manufacturing Company: A Novel Experimental Approach" *Mathematics* 11, no. 3: 621. <https://doi.org/10.3390/math11030621>.
66. Wenhao Xu, Changhe Li, Xin Cui, Yanbin Zhang, Min Yang, Teng Gao, Mingzheng Liu, Xiaoming Wang, Zongming Zhou, Shubham Sharma, Yusuf Suleiman Dambatta. Atomization mechanism and machinability evaluation with electrically charged nanolubricant grinding of GH4169. *Journal of Manufacturing Processes*, 2023. Our reference JMP4955, PII S1526-6125(23)00984-2, Volume 106, 24 November 2023, Pages 480-493. <https://doi.org/10.1016/j.jmapro.2023.10.037>.
67. P. Karthikeyan, L. Prabhu, B. Bhuvaneshwari, K. Yokesvaran, A. Jerin, R. Saravanan, S. Raghuvaran, Kassu Negash, and Shubham Sharma. Influences of Various Thermal Cyclic Behaviours on Thermo Adsorption/Mechanical Characteristics of Epoxy Composite Enriched with Basalt Fiber. *Adsorption Science and Technology (Wiley)*, Volume 2023 | Article ID 9716173 | <https://doi.org/10.1155/2023/9716173>.
68. K. A. Mohammed, R. A. Talib, B. Bhavani, N. H. J. Al Hasan, Ali Kareem, F. H. Alsultany, R. S. Zabibah, M. A. Alkhafaji, Shubham Sharma. The role of Cu Doping in Properties CdZnS thin films. *Chalcogenide Letters*, 2023,

20(11). <https://doi.org/10.15251/CL.2023.2011.789>.

69. Kumar, Raman, Shubham Sharma, Ranvijay Kumar, Sanjeev Verma, and Mohammad Rafighi. 2023. "Review of Lubrication and Cooling in Computer Numerical Control (CNC) Machine Tools: A Content and Visualization Analysis, Research Hotspots and Gaps" *Sustainability* 15, no. 6: 4970. <https://doi.org/10.3390/su15064970>.
70. Chu A, Li C, Zhou Z, Liu B, Zhang Y, Yang M, Gao T, Liu M, Zhang N, Dambatta YS, Sharma Shubham. Nanofluids Minimal Quantity Lubrication Machining: From Mechanisms to Application. *Lubricants*. 2023; 11(10):422. <https://doi.org/10.3390/lubricants11100422>.
71. Li, L., Zhang, Y., Cui, X., Said, Z., Sharma, S., Liu, M., Gao, T., Zhou, Z., Wang, X., & Li, C. (2023). Mechanical behavior and modeling of grinding force: A comparative analysis. *Journal of Manufacturing Processes*, 102, 921–954. <https://doi.org/10.1016/j.jmapro.2023.07.074>.
72. Shu, Xiaoyang, Raman Kumar, Rajeev Kumar Saha, Nikhil Dev, Željko Stević, Shubham Sharma, and Mohammad Rafighi. 2023. "Sustainability Assessment of Energy Storage Technologies Based on Commercialization Viability: MCDM Model" *Sustainability* 15, no. 6: 4707. <https://doi.org/10.3390/su15064707>
73. Kumar, Uday, Somnath Chattopadhyaya, Alok Kumar Das, A. H. Seikh, Shubham Sharma, Shashi Prakash Dwivedi, Kaori Nagai, Abhinav Kumar, Ashish Agrawal, and Sunpreet Singh. 2023. "Effect of Pulsation in Microstructure and Mechanical Properties of Titanium Alloy-Annealed Welded Joints at Different Temperatures" *Photonics* 10, no. 4: 372. <https://doi.org/10.3390/photonics10040372>.
74. Zhang, X., Li, C., Zhou, Z. et al. Vegetable Oil-Based Nanolubricants in Machining: From Physicochemical Properties to Application. *Chin. J. Mech. Eng.* 36, 76 (2023). <https://doi.org/10.1186/s10033-023-00895-5>.
75. Tan, Lingye, Tiong Lee Kong, Ziyang Zhang, Ahmed Sayed M. Metwally, Shubham Sharma, Kanta Prasad Sharma, Sayed M. Eldin, and Dominik

- Zimon. 2023. "Scheduling and Controlling Production in an Internet of Things Environment for Industry 4.0: An Analysis and Systematic Review of Scientific Metrological Data" Sustainability 15, no. 9: 7600. <https://doi.org/10.3390/su15097600>.
76. Raj, Aditya, Tarun Sharma, Sandeep Singh, Umesh Sharma, Prashant Sharma, Rajesh Singh, Shubham Sharma, Jatinder Kaur, Harshpreet Kaur, Bashir Salah, and et al. 2023. "Building a Sustainable Future from Theory to Practice: A Comprehensive PRISMA-Guided Assessment of Compressed Stabilized Earth Blocks (CSEB) for Construction Applications" Sustainability 15, no. 12: 9374. <https://doi.org/10.3390/su15129374>.
77. Sharma, Harsh, Ajay Kumar, Sravendra Rana, Nanda Gopal Sahoo, Muhammad Jamil, Rajeev Kumar, Shubham Sharma et al. "Critical Review on Advancements on the Fiber-Reinforced Composites: Role of Fiber/Matrix Modification on the Performance of the Fibrous Composites." Journal of Materials Research and Technology (2023). Journal of Materials Research and Technology, Volume 26, September–October 2023, Pages 2975-3002. <https://doi.org/10.1016/j.jmrt.2023.08.036>.
78. Sharma, Shubham, P. Sudhakara, Jujhar Singh, Sanjay M. R., and S. Siengchin. 2023. "Fabrication of Novel Polymer Composites from Leather Waste Fibers and Recycled Poly(Ethylene-Vinyl-Acetate) for Value-Added Products" Sustainability 15, no. 5: 4333. <https://doi.org/10.3390/su15054333>.
79. Shashi Prakash Dwivedi & Shubham Sharma (2023): Recovery of Al₂O₃/Al powder from aluminum dross to utilize as reinforcement along with graphene in the synthesis of aluminum-based composite, Particulate Science and Technology, <https://doi.org/10.1080/02726351.2023.2190049>.
80. Dwivedi SP, Sharma S. Metallic cladding through microwave energy of the mixture of Ni and 15% SiC powder on AISI 304: A green approach in surface engineering. Proceedings of the Institution of Mechanical

Engineers, Part E: Journal of Process Mechanical Engineering. 2023;0(0).
doi:10.1177/09544089231167930.

<https://doi.org/10.1177/09544089231167930>

81. Dwivedi SP, Saxena A, Haider I, Sharma S. Effect of zirconium diboride addition in zirconium dioxide reinforced aluminum-based composite fabricated by microwave sintering technique. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. 2023;0(0). doi:10.1177/09544089231164272.
<https://doi.org/10.1177/09544089231164272>.
82. Yang, Yuying & Min, Yang & Li, Chang & Li, Runze & Said, Zafar & Ali, Hafiz & Sharma, Shubham. (2023). Machinability of ultrasonic vibration-assisted micro-grinding in biological bone using nanolubricant. Frontiers of Mechanical Engineering. 18. 10.1007/s11465-022-0717-z.
83. Singh, Yadvinder & Sharma, Shubham & Singh, Gurpreet & Singh, Gursharan & Singh, Jujhar & Dwivedi, Shashi & Singh, Sunpreet & Kumar, Ranvijay & Chattopadhyaya, Somnath & Li, Chang. (2023). Studies on Physical, Micro-structural, and Slurry Erosion behaviour of Cold Sprayed Ni-20Cr+TiC+Re Coatings on SA516 steel for high-temperature applications. Surface Review and Letters. 30. 10.1142/S0218625X2350021X.
84. Dongzhou, Jia & Li, Chang & Liu, Jiahao & Zhang, Yanbin & Min, Yang & Gao, Teng & Said, Zafar & Sharma, Shubham. (2023). Prediction model of volume average diameter and analysis of atomization characteristics in electrostatic atomization minimum quantity lubrication. Friction. 1-25. 10.1007/s40544-022-0734-2.
85. Singh, Gurpreet & Sehijpal, Singh & Sharma, Shubham & Singh, Jujhar & Li, Chang & Krolczyk, Grzegorz & Kumar, Abhinav & Eldin, Sayed. (2023). Performance investigations for sustainability assessment of Hastelloy C-276 under different machining environments. Heliyon. 9.

e13933. 10.1016/j.heliyon.2023.e13933.

86. Liu, Dewei & Li, Chang & Qin, Aiguo & Zhang, Y B & Min, Yang & Gao, Teng & Wang, Xiaoming & Liu, Mingzheng & Cui, Xin & Ali, Hafiz & Sharma, Shubham. (2022). Kinematics and improved surface roughness model in milling. *The International Journal of Advanced Manufacturing Technology*. 10.1007/s00170-022-10729-8.
87. Dwivedi, Shashi Prakash, Shubham Sharma, Kanta Prasad Sharma, Abhinav Kumar, Ashish Agrawal, Rajesh Singh, and Sayed M. Eldin. 2023. "The Microstructure and Properties of Ni-Si-La₂O₃ Coatings Deposited on 304 Stainless Steel by Microwave Cladding" *Materials* 16, no. 6: 2209. <https://doi.org/10.3390/ma16062209>
88. S. Balaji, S. Dharani Kumar, U. Magarajan, S. RameshBabu, S. Ganeshkumar, Shubham Sharma, Shaimaa A. M. Abdelmohsen, Indranil Saha, Sayed M. Eldin. Comparative Analysis of Experimental and Numerical Investigation on Multiple Projectile Impact of AA5083 Friction Stir Welded Targets. *PLOS ONE*, 2023. 10.1371/journal.pone.0285254.
89. Sachin Kalsi, Jagjit Singh, Shubham Sharma, Indranil Saha, Mohammad Mahtab Alam, Jatinder Kaur, Rajesh Singh, Abhinav Kumar, Sayed M Eldin, NK Sharma. Relationship between the heterogeneity in mechanical properties, bone density, and composition parameters of Cortical Bone to design and develop bone scaffolds and implants: Analysis of bone microstructure. *PLOS ONE*, 2023. 10.1371/journal.pone.0283184.
90. Chopra A, Singh S, Kanoungo A, Singh G, Gupta NK, Sharma S, Joshi SK, Eldin SM. Multi-objective optimization of nitrile rubber and thermosets modified bituminous mix using desirability approach. *PLoS One*. 2023 Feb 21;18(2):e0281418. doi: 10.1371/journal.pone.0281418. PMID: 36809361; PMCID: PMC9942971.
91. Lalita Chopra, Kamal Kishor Thakur, Jasgurpreet Singh

- Chohan, S. Sharma, R. A. Ilyas, M. R. M. Asyraf, S. Z. S. Zakaria. Comparative Drug release investigations for Diclofenac Sodium drug (DS) by Chitosan-based grafted and crosslinked copolymers. *Materials (MDPI)*, *Materials* 2022, *15*(7), 2404; <https://doi.org/10.3390/ma15072404>.
92. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Catalin Prunco, Danil Y Pimenov. Multiple objective optimizations of Electrochemical Machining of AISI-304 Stainless Steel using Taguchi coupled Gray Relation Analysis: An Experimental Approach. [Paper communicated].
93. Xin Cui, Changhe Li, Yanbin Zhang, Wenfeng Ding, Qinglong An, Bo Liu, Hao Nan Li, Zafar Said, Shubham Sharma, Runze Li, Sujan Debnath. A comparative assessment of force, temperature and wheel wear in sustainable grinding aerospace alloy using bio-lubricant. 2022. *Frontiers of Mechanical Engineering (Springer)*. FME-22048-CXFront. *Mech. Eng.* 2022, *18*(2): 3. <https://doi.org/10.1007/s11465-022-0719-x>.
94. Rohan Lal Kshetry, Arnab Gupta, Somnath Chattopadhyaya, Madhulika Srivastava, Shubham Sharma, Jujhar Singh, Anirban Das Gupta, S. Rajkumar. Fabrication of a low-cost electronically controlled mobile ventilator incorporating mechanized AMBU Bag for ailing human subjects needing external respiratory support system during COVID19 pandemic. *Journal of Healthcare Engineering*. 2022. <https://doi.org/10.1155/2022/6436818>.
95. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Catalin Prunco, Danil Y Pimenov. Fabrication and Machinability Analysis of Silicon Carbide and Nickel Particles reinforced Aluminium Matrix Composites. [Paper communicated].
96. Ansari, Md Obaidullah, Joyjeet Ghose, Somnath Chattopadhyaya, Debasree Ghosh, Shubham Sharma, Prashant Sharma, Abhinav Kumar,

- Changhe Li, Rajesh Singh, and Sayed M. Eldin. 2022. "An Intelligent Logic-Based Mold Breakout Prediction System Algorithm for the Continuous Casting Process of Steel: A Novel Study" *Micromachines* 13, no. 12: 2148. <https://doi.org/10.3390/mi13122148>.
97. Singh, Gurpreet, Harish Kumar, Harmesh Kumar Kansal, Kamal Sharma, Raman Kumar, Jasgurpreet Singh Chohan, Sandeep Singh, Shubham Sharma, Changhe Li, Grzegorz Królczyk, and Jolanta B. Królczyk. 2022. "Multiobjective Optimization of Chemically Assisted Magnetic Abrasive Finishing (MAF) on Inconel 625 Tubes Using Genetic Algorithm: Modeling and Microstructural Analysis" *Micromachines* 13, no. 8: 1168. <https://doi.org/10.3390/mi13081168>.
98. Xin Cui, Changhe Li, Min Yang, Mingzheng Liu, Teng Gao, Xiaoming Wang, Zafar Said, Shubham Sharma, Yanbin Zhang. Enhanced grindability and mechanism in the magnetic traction nanolubricant grinding of Ti-6Al-4 V. *Tribology International*, Volume 186, August 2023, 108603. <https://doi.org/10.1016/j.triboint.2023.108603>.
99. Wenhao Xu, Changhe Li, Yanbin Zhang, Hafiz Muhammad Ali, Shubham Sharma, Runze Li, Min Yang, Teng Gao, Mingzheng Liu, Xiaoming Wang, Zafar Said, Xin Liu, Zongming Zhou. Electrostatic atomization minimum quantity lubrication machining: from mechanism to application. *International Journal of Extreme Manufacturing*. <https://doi.org/10.1088/2631-7990/ac9652>.
100. Dwivedi, Shashi Prakash, Shubham Sharma, B. Vijay Krishna, Pankaj Sonia, Kuldeep Kumar Saxena, Amjad Iqbal, and Faramarz Djavanroodi. "Effect of the addition of TiB₂ with waste glass powder on microstructure, mechanical and physical behavior of PET-based polymer composite material." *Mechanics of Advanced Materials and Structures* (2023): 1-10. <https://doi.org/10.1080/15376494.2023.2239229>.
101. A. Karthik, Jafrey Daniel James D, V. Vijayan, Zubair Ahmad, S. Rajkumar, Shubham Sharma, Kanta Prasad Sharma, Rajesh Singh, Changhe Li, Sayed M. Eldin. Study on the physicomechanical, fracture-

deformation, interface-adhesion, and water-absorption properties of twill fabric cotton-bamboo/epoxy composites. *Journal of Materials Research and Technology*, 2023. <https://doi.org/10.1016/j.jmrt.2023.05.102>.

102. Y. Suresh Babu, S. Ganeshkumar, S. DharaniKumar, N. Muthukumaran, Shubham Sharma, Viyat Varun Upadhyay, Abhinav Kumar, and Sayed M Eldin. Performance Emissions, and Combustion Analysis of an Internal Combustion (I.C) Engine with a Copper-Chromium-Zirconium (CuCr1Zr) Coated Piston Using Plasma-Spray Process with Biodiesel: A Novel Approach. 2023, PLOS ONE. **[Article accepted for publication]**.

103. Fengge Yao, Zenan Qin, Xiaomei Wang, Mengyao Chen, Adeeb Noor, Shubham Sharma, Jagpreet Singh, Dražan Kozak, Anica Hunjet. The evolution of renewable energy environments utilizing artificial intelligence to enhance energy efficiency and finance. *Heliyon Elsevier*, 2023. VOLUME 9, ISSUE 5, E16160. <https://doi.org/10.1016/j.heliyon.2023.e16160>.

104. Shashi Prakash Dwivedi, Manish Maurya, Shubham Sharma. Mechanical and Microstructure Behavior of Cladding Surface SS-304 Coating with Ni and Al₂O₃ by Microwave Technique. *J. Inst. Eng. India Ser. C*. <https://doi.org/10.1007/s40032-023-00947-8>.

105. Shashi Prakash Dwivedi, Shubham Sharma, B.D.Y. Sunil, Nakul Gupta, Kuldeep K. Saxena, Sayed M. Eldin, Sana Shahab, Mohammed Ayad Alkhafaji, Sherzod Shukhratovich Abdullaev. Heat Treatment Behavior of Cr in the Form of Collagen Powder and Al₂O₃ Reinforced Aluminum-Based Composite Material. *Journal of Materials Research and Technology*. 2023. <https://doi.org/10.1016/j.jmrt.2023.06.203>.

106. Selvaraj, Ganeshkumar, Yessian, Sureshbabu, Ramalingam, Sureshkumar, Dharani Kumar, Selvan, Gopal, Gokilakrishnan, Sharma, Shubham, Kumar, Abhinav, Li, Changhe and Abbas, Mohamed.

"Investigation on topology-optimized compressor piston by metal additive manufacturing technique: Analytical and numeric computational modeling using finite element analysis in ANSYS" *Open Physics*, vol. 21, no. 1, 2023, pp. 20220259. <https://doi.org/10.1515/phys-2022-0259>.

107. Miniappan, Pethampalayam Karuppanan, Marimuthu, Sivagnanam, Kumar, Selvan Dharani, Gokilakrishnan, Gopal, Sharma, Shubham, Li, Changhe, Dwivedi, Shashi Prakash and Abbas, Mohamed. "Mechanical, fracture-deformation, and tribology behavior of fillers-reinforced sisal fiber composites for lightweight automotive applications" *REVIEWS ON ADVANCED MATERIALS SCIENCE*, vol. 62, no. 1, 2023, pp. 20230342. <https://doi.org/10.1515/rams-2023-0342>.

108. Harish K Garg, Shubham Sharma, Rajesh Kumar, Alakesh Manna, Abhinav Kumar, Changhe Li, Yanbin Zhang, Bashir Salah, Syed Sajid Ullah. Mechanical, Tribological, and Morphological Properties of SiC and Gr reinforced Al-0.7Fe-0.6Si-0.375Cr-0.25Zn based stir-casted hybrid metal matrix composites for automotive applications: Fabrication and characterizations. *Heliyon Elsevier*, 2023. **[Article in Press]**.

109. P.K. Miniappan, S. Marimuthu, S. Dharani Kumar, Shubham Sharma, Abhinav Kumar, Bashir Salah, Syed Sajid Ullah. Exploring the Mechanical, Tribological, and Morphological characteristics of Areca Fiber Epoxy Composites Reinforced with Various Fillers for multifaceted applications. *Frontiers in Materials*, Volume 10–2023, doi: 10.3389/fmats.2023.1185215.

110. Mingzheng Liu, Changhe Li, Min Yang, Teng Gao, Xiaoming Wang, Xin Cui, Yanbin Zhang, Zafar Said, Shubham Sharma. Mechanism and enhanced grindability of cryogenic air combined with biolubricant grinding titanium alloy. *Tribology International*, Volume 187, September 2023, 108704. <https://doi.org/10.1016/j.triboint.2023.108704>.

111. Dhiman, Rajeev & Sharma, Shubham & Gulati, Piyush & Singh, Jai & Jha, Kanishka & Li, Chang & Kumar, Abhinav & Eldin, Sayed & Abbas, Mohamed. (2023). Fabrication and characterizations of Glass fiber-reinforced functional leaf spring composites with or without microcapsule-based dicyclopentadiene as self-healing agent for automobile industrial applications: Comparative analysis. *Journal of Materials Research and Technology*. 25. 10.1016/j.jmrt.2023.06.039.
112. Shashi Prakash Dwivedi, Vijay Chaudhary, Satpal Sharma, and Shubham Sharma. Ultrasonic vibration effect in the development of Al/CCLW/alumina metal matrix composite to enhance mechanical properties. *Proc IMechE Part E: J. Process Mechanical Engineering*. 1–12. <https://doi.org/10.1177/09544089231200467>.
113. Ray Tahir Mushtaq; Yanen Wang; Mudassar Rehman; Aqib Mashood Khan; Chengwei Bao; SHUBHAM SHARMA; Sayed M. Eldin; Mohamed Abbas. Investigation of the mechanical properties, surface quality, and energy efficiency of a fused filament fabrication for PA6. *Reviews on Advanced Materials Science*, 2023. <https://doi.org/10.1515/rams-2022-0332>.
114. Fatima H. Malik, Zainab J. Sweah, Ahmed J. Mohammed, Kahtan A. Mohammed, Shubham Sharma. Electrical, Optical Conductivity of Pentacene and the Effect of Adding the Extracted Dye on the Electrical Properties of Pentacene. *Revue des Composites et des Matériaux Avancés-Journal of Composite and Advanced Materials*, Vol. 33, No. 4, pp. 227-232. <https://doi.org/10.18280/rcma.330403>.
115. Sundaramali G, Jeeva PA, Karthikeyan S, Kandavel TK, Arulmurugan B, S Rajkumar, Shubham Sharma*, Changhe Li, Shashi Prakash Dwivedi, Abhinav Kumar, Rajesh Singh, Sayed M. Eldin. Experimental investigations of electrodeposited Zn-Ni, Zn-Co, and Ni-Cr-Co-based novel coatings on AA7075

substrate to ameliorate the mechanical, abrasion, morphological, and corrosion properties for automotive applications. *Reviews on Advanced Materials Science*. 2023, 10.1515/rams-2022-0324.

116. Ray Tahir Mushtaq, Yanen Wang, Aqib Mashood Khan, Mudassar Rehman, Xinpei Li, Shubham Sharma. A post-processing laser polishing method to improve process performance of 3D printed new Industrial Nylon-6 polymer. *Journal of Manufacturing Processes*, Volume 101, 8 September 2023, Pages 546-560. <https://doi.org/10.1016/j.jmapro.2023.06.019>.

117. N. Banerjee, A. Sen, P.S. Ghosh, A.R. Biswas, Shubham Sharma, Abhinav Kumar, Rajesh Singh, Changhe Li, Jatinder Kaur, Sayed M. Eldin. Prediction and simulation of mechanical properties of Borophene reinforced Epoxy Nanocomposites using Molecular Dynamics and FEA analysis. *Reviews on Advanced Materials Science*. 2023, 10.1515/rams-2022-0322.

118. Hasnain, S M Mozammil, Rajeshwari Chatterjee, Prabhat Ranjan, Gaurav Kumar, Shubham Sharma, Abhinav Kumar, Bashir Salah, and Syed Sajid Ullah. 2023. "Performance, Emission, and Spectroscopic Analysis of Diesel Engine Fuelled with Ternary Biofuel Blends" *Sustainability* 15, no. 9: 7415. <https://doi.org/10.3390/su15097415>.

119. Alok Jain, Ansari Novman Nabeel, Sunita Bhagwat, Rajeev Kumar, Shubham Sharma, Dražan Kozak, Anica Hunjet, Abhinav Kumar, Rajesh Singh. Fabrication of polypyrrole gas sensor for detection of NH₃ using an oxidizing agent and pyrrole combinations: Studies and characterizations. *Heliyon Elsevier*, Article number: e17611, HLY_e17611, PII: S2405-8440(23)04819-3, DOI: 10.1016/j.heliyon.2023.e17611. <https://doi.org/10.1016/j.heliyon.2023.e17611>

120. Reza Alayi, Mohammad Hossein Ahmadi, Amir Reza Visei, Shubham Sharma and Atabak Najafi. Technical and environmental analysis of photovoltaic and solar water heater cogeneration system: a case study of Saveh city. *International Journal of Low Carbon Technologies (IJLCT)*, 2020, 00, 1–7. DOI:10.1093/ijlct/ctaa077.
121. Ambuj Saxena, Shashi Prakash Dwivedi, Ashish Kumar Srivastava, Abhishek Kaushik, Shubham Sharma. Micro-Mechanical Finite Element Analysis on Mechanical Behavior of EN31 Steel-Based Metal Matrix Composite. 2022, *Trans Indian Inst Met* <https://doi.org/10.1007/s12666-022-02691-6>.
122. Mingzheng LIU, Changhe LI, Yanbin ZHANG, Min YANG, Teng GAO, Xin CUI, Xiaoming WANG, Wenhao XU, Zongming ZHOU, Bo LIU, Zafar SAID, Runze LI, Shubham SHARMA. Analysis of grinding mechanics and improved grinding force model based on randomized grain geometric characteristics. *Chinese Journal of Aeronautics*, 2022. <https://doi.org/10.1016/j.cja.2022.11.005>.
123. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Catalin Prunco, Danil Y Pimenov. Synthesis and Characterization of Silicon Carbide and Molybdenum reinforced Al-Si alloy Matrix Composites. [Paper communicated].
124. Asim Ahmad, Om Prakash, Anil Kumar, Rajeshwari Chatterjee, Shubham Sharma, Vineet Prabhkar, Kushagra Kulshreshtha, CHANGHE LI, Elsayed Tag Eldin. A comprehensive state-of-the-art review on the recent developments in Greenhouse drying. *Energies* **2022**, 15(24), 9493; <https://doi.org/10.3390/en15249493>.
125. Dwivedi SP, Saxena A, Sharma S. Development of Dissimilar AA2014 and AA2024 Based Composite by Using nano-TiC as Reinforcement Via FSP Technique to Categorize Microstructure, Interfacial Layer, and Mechanical Properties. *Research Square*; 2023. DOI: 10.21203/rs.3.rs-

2893732/v1.

126. Teng GAO, Yanbin ZHANG, Changhe LI, Yiqi WANG, Yun CHEN, Qinglong AN, Song ZHANG, Hao Nan LI, Huajun CAO, Hafiz Muhammad ALI, Zongming ZHOU, Shubham Sharma. Fiber-reinforced composites in milling and grinding: machining bottlenecks and advanced strategies. 2022. *Frontiers of Mechanical Engineering*, <https://doi.org/10.1007/s11465-022-0680-8>.
127. Yuying Yang, Min Yang, Changhe Li, Runze Li, Zafar Said, Hafiz Muhammad Ali, Shubham Sharma. Machinability of ultrasonic vibration assisted micro-grinding in biological bone using nanolubricant. *Frontiers of Mechanical Engineering*, FME-22046-YYFront. Mech. Eng. 2022, 18(1): 1. <https://doi.org/10.1007/s11465-022-0717-z>.
128. Sanjeev Kumar, Sandeep Gandotra, Shubham Sharma, Jatinder Kumar, Jujhar Singh, Somnath Chattopadhyaya, Shashi Prakash Dwivedi, Ambuj Saxena, Kanishka Jha, S. Rajkumar. Machinability Evaluation of AISI-4340 using Variable Particle Sized Solid Lubricant: Experimental measurement and multi-objective modelling using Taguchi and RSM approach. *Advances in Materials Science and Engineering (Hindawi)*. 2021. **[Paper accepted for Publication]**.
129. Kumar, J.; Sharma, S.; Singh, J.; Singh, S.; Singh, G. Optimization of Wire-EDM Process Parameters for Al-Mg-0.6Si-0.35Fe/15%RHA/5%Cu Hybrid Metal Matrix Composite Using TOPSIS: Processing and Characterizations. *J. Manuf. Mater. Process.* **2022**, 6, 150. <https://doi.org/10.3390/jmmp6060150>.
130. Kumar M, Anand A, Chatterjee R, Sharma S, Maiti TK, Dwivedi SP, Saxena A, Li C, Eldin EMT. Investigation on Carbonation and Permeability of Concrete with Rice Husk Ash and Shop Solution Addition. *Materials*. 2022; 15(17):6149. <https://doi.org/10.3390/ma15176149>.

131. Siddiqui MAH, Akhtar S, Chattopadhyaya S, Sharma S, Li C, Dwivedi SP, Antosz K, Machado J. Technical Risk Assessment for the Safe Design of a Man-Rider Chair Lift System. *Machines*. 2022; 10(9):769. <https://doi.org/10.3390/machines10090769>.
132. Sandip Kumar Mishra, Sanjeev Dahiya, Brijesh Gangil, Lalit Ranakoti, Tej Singh, Shubham Sharma, Pawinee Boonyasopon, Sanjay Mavinkere Rangappa, Suchart Siengchin. Mechanical, Morphological, and Tribological Characterization of novel Walnut filler reinforced Polylactic acid-based biocomposites and prediction based on Artificial Neural Network. *Biomass Conversion and Biorefinery*. 2022. <https://doi.org/10.1007/s13399-022-03670-z>.
133. Kanishka Jha, Paresh Tamrakar, Rajeev Kumar, Shubham Sharma, Jujhar Singh, R.A. Ilyas, SM Rangappa, S. Siengchin. Effect of Hybridization on Physio-mechanical behavior of Vetiver and Jute Fibres reinforced Epoxy composites for Structural applications: Studies on fabrication, Physicomechanical, Water-absorption, and Morphological properties. *Journal of Industrial Textiles (SAGE)*. 2022, Vol. 0(0), 1-23. <https://doi.org/10.1177/15280837221098573>.
134. Dwivedi, S.P., Yadav, R., Islam, A. et al. Synthesis, Physical and Mechanical Behavior of Agro-Waste RHA and Eggshell-Reinforced Composite Material. *J. Inst. Eng. India Ser. C* 103, 1455–1467 (2022). <https://doi.org/10.1007/s40032-022-00879-9>
135. Yadav, Vikas & Singh, Sarbjit & Chaudhary, Neeru & Garg, Mohinder & Sharma, Shubham & Kumar, Amit & Li, Chang & Eldin, Elsayed. (2023). Dry sliding wear characteristics of natural fibre reinforced poly-lactic acid composites for Engineering applications: Fabrication, properties and characterizations. *Journal of Materials Research and Technology*. 10.1016/j.jmrt.2023.01.006.
136. Kartick Bhushan, Somnath Chattopadhyaya, Shubham Sharma, Kamal Sharma, Changhe Li, Yanbin Zhang, Raman Kumar, Elsayed Mohamed Tag Eldin. Reliability, availability and maintainability analysis of dumper transmission Clbt754 using Markov modeling for open pit mining. *PLOS ONE*. 2023. 10.1371/journal.pone.0280467.

137. Varun Tripathi, Somnath Chattopadhyaya, A.K. Mukhopadhyay, Suvandan Saraswat, Shubham Sharma, Changhe Li, S. Rajkumar, Fasika Bete Georgise. A novel smart production management system for the enhancement of industrial sustainability in Industry 4.0. *Mathematical Problems in Engineering* (Hindawi). 2021. Volume 2022 | Article ID 6424869 | <https://doi.org/10.1155/2022/6424869>.
138. P. Ruban, L. Joji Reddy SJ, Rajalakshmi Manickam, R. Rathinam, Syed Ali M, S. Rajkumar, Shubham Sharma, P. Sudhakara, Elsayed Mohamed Tag Eldin. Green synthesis, characterizations, and antibacterial-activity of silver nanoparticles from themeda quadrivalvis, in conjugation with macrolide antibiotics against respiratory pathogens. *Reviews on Advanced Materials Science* (De Gruyter). 2022. 10.1515/rams-2022-0301.
139. Ranakoti, Lalit, Brijesh Gangil, Prabhakar Bhandari, Tej Singh, Shubham Sharma, Jujhar Singh, and Sunpreet Singh. 2023. "Promising Role of Polylactic Acid as an Ingenious Biomaterial in Scaffolds, Drug Delivery, Tissue Engineering, and Medical Implants: Research Developments, and Prospective Applications" *Molecules* 28, no. 2: 485. <https://doi.org/10.3390/molecules28020485>.
140. Ram Narayan Muni, Jujhar Singh, Vineet Kumar, Shubham Sharma, P. Sudhakara, Vivek Aggarwal, S. Rajkumar. Multi-objective optimization of EDM parameters for Rice husk Ash/Cu/Mg reinforced hybrid Al- 0.7Fe-0.6Si-0.375Cr-0.25Zn metal-matrix nanocomposites for Engineering applications: Fabrication, and Morphological Analysis. 2022. *Journal of Nanomaterials* (Hindawi-Wiley). <https://doi.org/10.1155/2022/2188705>.
141. Sujitha, R.; Sunmathi, N.; Manikandan, R.K.; Arunprasad, J.; Rajkumar, S.; Sharma, S.; Sharma, K.; Li, C.; Tag Eldin, E.M. Analytical and Experimental Study on Cold-Formed Steel Built-Up Sections for Bending. *Materials* **2022**, *15*, 7140. <https://doi.org/10.3390/ma15207140>.
142. Chaudhary N, Singh S, Garg MP, Garg HK, Sharma S, Li C, Eldin EMT, El-Khatib S. Parametric Optimisation of Friction-Stir-Spot-Welded Al 6061-T6 Incorporated with Silicon Carbide Using a Hybrid WASPAS–

- Taguchi Technique. *Materials*. 2022; 15(18):6427.
<https://doi.org/10.3390/ma15186427>.
143. R Saravanan, T Sathish, V Vijayan, S. Rajkumar, Shubham Sharma, Changhe Li, Yanbin Zhang, Kamal Sharma, Sayed M. Eldin. Eco-friendly MoS₂/waste Coconut oil Nanofluid for Machining of Magnesium implants. *Reviews on Advanced Materials Science (De Gruyter)*, 2022. 10.1515/rams-2022-0296.
144. Ambuj Saxena, SP Dwivedi, Shubham Sharma, Abhishek Kaushik. Investigation on Mechanical Properties of ZTA+ Cr₃C₂+Ni Reinforced EN31 Steel-Based Composite Material: Micromechanical FEA. Part E: *Journal of Process Mechanical Engineering*, 2022.
<https://doi.org/10.1177/09544089221113141>.
145. Atul Raj, J.P. Misra, Ravinder Pal Singh, Gurminder Singh, Shubham Sharma, SM Eldin. Performance analysis of WEDM during the machining of Inconel 690 miniature gear using RSM and ANN modeling approaches. *Reviews on Advanced Materials Science (De Gruyter)*, 2022.
<https://doi.org/10.1515/rams-2022-0288>.
146. Nelli Vladimirovna Syreyschikova, Danil Yurievich Pimenov, Elena Nikolaevna Yaroslavova, Munish Kumar Gupta, Shubham Sharma, Khaled Giasin. Product Quality Planning in Laser Metal Processing Based on Quality Function Deployment. *Journal of Open Innovation: Technology, Market, and Complexity (MDPI)*. 2021, 2021, 7(4), 240.
<https://doi.org/10.3390/joitmc7040240>
147. Dongzhou Jia, Yanbin Zhang, Changhe Li, Min Yang, Teng Gao, Zafar Said, Shubham Sharma, Lubrication-enhanced mechanisms of titanium alloy grinding using lecithin biolubricant, *Tribology International*, 2022, 107461, PII S0301-679X(22)00034-2.
<https://doi.org/10.1016/j.triboint.2022.107461>.
148. Tripathi, V.; Chattopadhyaya, S.; Mukhopadhyay, A.K.; Sharma, S.; Li, C.; Singh, S.; Saleem, W.; Salah, B.; Mohamed, A. Recent Progression Developments on Process Optimization Approach for Inherent Issues in Production Shop Floor Management for Industry

4.0. *Processes*, **2022**, *10*, 1587. <https://doi.org/10.3390/pr10081587>.

149. Pankaj Sharma, Somnath Chattopadhyaya, Nirmal Kumar Singh, Ashok Kumar, Shubham Sharma, Changhe Li, Vineet Kumar, Szymon Wojciechowski, Grzegorz Krolczyk, Sayed M. Eldin. Recent developments in the design, development, and analysis of the influence of external magnetic-field on gas-metal arc welding of non-ferrous alloys: review on optimization of arc-structure to enhance the morphology, and mechanical properties of welded joints for automotive applications. *Heliyon* (Elsevier), 8, 2022, e11812. <https://doi.org/10.1016/j.heliyon.2022.e11812>.
150. B. Elambharathi, S. Dharani Kumar, V.U. Dhanoop, S. Dinakar, S. Rajumar, Shubham Sharma, Vineet Kumar, Changhe Li, Elsayed Mohamed Tag Eldin, Szymon Wojciechowski. Novel insights on different treatment of magnesium alloys: A critical review. *Heliyon* (Elsevier), 8, 2022, e11712. <https://doi.org/10.1016/j.heliyon.2022.e11712>.
151. Partha Sarathi Ghosh, Abhishek Sen, Somnath Chattopadhyaya, Shubham Sharma, Jujhar Singh, Changhe Li, Grzegorz Krolczyk, S. Rajkumar. Progressive developments and challenges in dissimilar laser welding of steel to various other light alloys (Al/Ti/Mg): A comprehensive review. *Heliyon* (Elsevier), 8, 2022, e11710. <https://doi.org/10.1016/j.heliyon.2022.e11710>.
152. Ravinder Kumar, Kanishka Jha, Shubham Sharma, Vineet Kumar, Changhe Li, Elsayed Mohamed Tag Eldin, S. Rajkumar, G. Królczyk. Effect of particle size and weight fraction of SiC on the mechanical, tribological, morphological, and structural properties of Al-5.6Zn-2.2Mg-1.3Cu composites using RSM: fabrication, characterization, and modelling. *HELIYON* (Elsevier), 2022. PII: S2405-8440(22)01890-4 DOI: <https://doi.org/10.1016/j.heliyon.2022.e10602>.
153. Yanbin ZHANG, Wenyi LI, Lizhi TANG, Changhe LI, Xiaoliang LIANG, Shuaiqiang XU, Zafar SAID, Shubham SHARMA, Yun CHEN, Bo LIU,

Zongming ZHOU. Abrasive water jet tool passivation: from mechanism to application[J]. Journal of Advanced Manufacturing Science and Technology. DOI: 10.51393/j.jamst.2022018.

154. Jasgurpreet Singh Chohan; Nitin Mittal; Raman Kumar; Sandeep Singh; Shubham Sharma; Shashi Prakash Dwivedi; Ambuj Saxena; Somnath Chattopadhyaya; R.A. Ilyas; Chi Hieu Le; Szymon Wojciechowski. Optimization of FFF Process Parameters by Naked Mole-Rat Algorithms with Enhanced Exploration and Exploitation Capabilities, *Polymers* (MDPI), 2021, 13, 1702. <https://doi.org/10.3390/polym13111702>.
155. Rajeev Kumar, Jujhar Singh, Shubham Sharma, Changhe Li, Grzegorz Królczyk, Elsayed Mohamed Tag Eldin, Szymon Wojciechowski. Identification of localized defects and fault Size estimation of taper roller bearing (NBC_30205) with signal processing using the Shannon Entropy method in MATLAB for automobile industries applications. *Heliyon* (Elsevier), 2022. S2405-8440(22)03341-2. <https://doi.org/10.1016/j.heliyon.2022.e12053>.
156. Wang, X., Song, Y., Li, C. *et al.* Nanofluids application in machining: A comprehensive review. *Int J Adv Manuf Technol* (2023). <https://doi.org/10.1007/s00170-022-10767-2>.
157. Mingzheng Liu, Changhe Li, Yanbin Zhang, Min Yang, Teng Gao, Xin Cui, Xiaoming Wang, Haonan Li, Zafar Said, Runze Li, Shubham Sharma. Analysis of grain tribology and improved grinding temperature model based on discrete heat source, *Tribology International*, Volume 180, 2023, 108196, <https://doi.org/10.1016/j.triboint.2022.108196>.
158. Xiaoming Wang, Changhe Li, Yanbin Zhang, Hafiz Muhammad Ali, Shubham Sharma, Runze Li, Min Yang, Zafar Said, Xin Liu. Tribology of enhanced turning using biolubricants: A comparative assessment. *Tribology International*, Volume 174, October 2022, 107766. <https://doi.org/10.1016/j.triboint.2022.107766>.
159. Shashi Prakash Dwivedi, Ambuj Saxena, Shubham Sharma, Ashish Kumar Srivastava, Nagendra Kumar Maurya. Influence of SAC and

Eggshell addition in the Physical, Mechanical and Thermal Behaviour of Cr reinforced Aluminium Based Composite. International Journal of Cast Metals Research. <https://doi.org/10.1080/13640461.2021.1877943>.

160. Ambuj Saxena, S.P. Dwivedi, Ashish Srivastava, Abhishek Sharma, Vinod Kumar Yadav, K Srinivas, Abhishek Kaushik, Nitin Kotkunde Shubham Sharma. A Comparatively Numerical Investigation on Heat Transfer Behavior of Different Materials Used for Internal Combustion Engines. International Journal of Engine Research. **2022**. <https://doi.org/10.1177/14680874221112722>.
161. Tiwary AK, Singh S, Kumar R, Sharma K, Chohan JS, Sharma S, Singh J, Kumar J, Deifalla AF. Comparative Study on the Behavior of Reinforced Concrete Beam Retrofitted with CFRP Strengthening Techniques. Polymers MDPI. 2022; 14(19):4024. <https://doi.org/10.3390/polym14194024>.
162. Xin Cui, Changhe Li, Yanbin Zhang, Zafar Said, Sujana Debnath, Shubham Sharma, Hafiz Muhammad Ali, Min Yang, Teng Gao, Runze Li, Grindability of titanium alloy using cryogenic nanolubricant minimum quantity lubrication, Journal of Manufacturing Processes, Volume 80, 2022, Pages 273-286, <https://doi.org/10.1016/j.jmapro.2022.06.003>.
163. Gursharan Singh, Shubham Sharma, Manoj Mittal, Gurminder Singh, Jujhar Singh, Changhe Li, Aqib Mashood Khan, Shashi Prakash Dwivedi, Ray Tahir Mushtaq, Sunpreet Singh. Impact of post-heat-treatment on the surface-roughness, residual stresses, and micromorphology characteristics of plasma-sprayed pure hydroxyapatite and 7%-Aloxite reinforced hydroxyapatite coatings deposited on titanium alloy-based biomedical implants. 2022. Journal of Materials Research & Technology (Elsevier). <https://doi.org/10.1016/j.jmrt.2022.03.065>.
164. Sumit Nijjar, P. Sudhakara, Shubham Sharma, Sanjeev Saini, Aklilu Teklemariam, V. Mariselvam, Satheesh Kumar Sampath, J.I. Song. Influence of alkali treatment and Maleated Polypropylene (MAPP) compatibiliser on the dry-sliding wear and frictional behaviour of

Borassus Fruit fine Fiber (BFF)/Polypropylene (PP) polymer Composites for various Engineering applications. *Advances in Materials Science and Engineering* (Hindawi). 2021. Volume 2021, Article ID 5822245. <https://doi.org/10.1155/2021/5822245>.

165. S. Ganeshkumar, S. Dharani Kumar, U. Magarajan, S. Rajkumar, B. Arulmurugan, Shubham Sharma, Changhe Li, R.A. Ilyas, Mohamed Fathy Badran. Investigation of Tensile properties of different infill pattern structures of 3D printed PLA Polymers: Analysis and Validation using Finite Element Analysis in ANSYS. *Materials* 2022, 15(15), 5142; <https://doi.org/10.3390/ma15155142>.
166. Qiu, Y.; Wang, Z.; Pan, J.; Hu, F.; Sharma, S.; Deifalla, A.F. Optimal Design of Semirigid Connection Steel Frame with Steel Plate Shear Walls Using Dolphin Echolocation Algorithm. *Buildings* **2022**, *12*, 1735. <https://doi.org/10.3390/buildings12101735>.
167. Singh, G.; Tiwary, A.K.; Singh, S.; Kumar, R.; Chohan, J.S.; Sharma, S.; Li, C.; Sharma, P.; Deifalla, A.F. Incorporation of Silica Fumes and Waste Glass Powder on Concrete Properties Containing Crumb Rubber as a Partial Replacement of Fine Aggregates. *Sustainability* **2022**, *14*, 14453. <https://doi.org/10.3390/su142114453>
168. Bhushan, K.; Chattopadhyaya, S.; Sharma, S.; Sharma, K.; Li, C.; Zhang, Y.; Eldin, E.M.T. Analyzing Reliability and Maintainability of Crawler Dozer BD155 Transmission Failure Using Markov Method and Total Productive Maintenance: A Novel Case Study for Improvement Productivity. *Sustainability* **2022**, *14*, 14534. <https://doi.org/10.3390/su142114534>.
169. Uniyal, A.; Prajapati, Y.K.; Ranakoti, L.; Bhandari, P.; Singh, T.; Gangil, B.; Sharma, S.; Upadhyay, V.V.; Eldin, S.M. Recent Advancements in Evacuated Tube Solar Water Heaters: A Critical Review of the Integration of Phase Change Materials and Nanofluids with ETCs. *Energies* **2022**, *15*, 8999. <https://doi.org/10.3390/en15238999>.
170. Sharma, T.; Singh, S.; Sharma, S.; Sharma, P.; Gehlot, A.; Shukla, A.K.; Eldin, S.M. The Use of Marble Dust, Bagasse Ash, and Paddy Straw

to Improve the Water Absorption and Linear Shrinkage of Unfired Soil Block for Structure Applications. *Materials* **2022**, *15*, 7786. <https://doi.org/10.3390/ma15217786>.

171. Jasjeevan Singh, Simranpreet Singh Gill, Manu Dogra, Rupinder Singh, Malkeet Singh, Shubham Sharma, Gursharan Singh, Changhe Li, S. Rajkumar. State of the art review on the sustainable dry machining of advanced materials for multifaceted Engineering applications: Progressive advancements and directions for future prospects. *Materials Research Express*, 2022. <https://doi.org/10.1088/2053-1591/ac6fba>.
172. Jasjeevan Singh, Simranpreet Singh Gill, Manu Dogra, Shubham Sharm, Mandeep Singh, Shashi Prakash Dwivedi, Changhe Li, Sunpreet Singh, Shoaib Muhammad, Bashir Salah and Mohamed A. Shamseldin. Effect of Ranque-HilschVortex Tube Cooling to Enhance the Surface-Topography and Tool-Wear in Sustainable Turning of Al-5.6Zn-2.5Mg-1.6Cu-0.23Cr-T6 Aerospace Alloy. 2022, *Materials MDPI*. **(Article Accepted for publication and is in Press)**.
173. Gao Yuan, Shubham Sharma, Jamal Tabe Arjmand, and Alibek Issakhov. Investigation of the effective application of marine design concept in green ecological residential indoor environment design. *International Journal of Low-Carbon Technologies* 2021, *00*, 1–6. <https://doi.org/10.1093/ijlct/ctab061>.
174. Rahman, I.; Singh, P.; Dev, N.; Arif, M.; Yusufi, F.N.K.; Azam, A.; Alam, M.M.; Singh, S.; Chohan, J.S.; Kumar, R.; Sharma, L.; Tag-Eldin, E.; Sharma, S.; Asyraf, M.R.M. Improvements in the Engineering Properties of Cementitious Composites Using Nano-Sized Cement and Nano-Sized Additives. *Materials* **2022**, *15*, 8066. <https://doi.org/10.3390/ma15228066>.
175. Prakash, O.; Ahmad, A.; Kumar, A.; Chatterjee, R.; Chattopadhyaya, S.; Sharma, S.; Sharma, A.; Li, C.; Tag Eldin, E.M. Performance Analysis, and Economic-Feasibility Evaluation of Single-Slope Single-Basin Domestic Solar Still under Different Water-Depths. *Energies* **2022**, *15*, 8517.

<https://doi.org/10.3390/en15228517>.

176. Khan, A.M., Anwar, S., Alfaify, A. *et al.* Comparison of machinability and economic aspects in turning of Haynes-25 alloy under novel hybrid cryogenic-LN oils-on-water approach. *Int J Adv Manuf Technol* (2022). <https://doi.org/10.1007/s00170-022-08815-y>.
177. Zhenjing Duan, Changhe Li, Yanbin Zhang, Min Yang, Teng Gao, Xin Liu, Runze Li, Zafar Said, Sujana Debnath, Shubham Sharma. Mechanical behavior and Semiempirical force model of aerospace aluminum alloy Milling using Nano biological lubricant. 2022. *Frontiers of Mechanical Engineering*. <https://doi.org/10.1007/s11465-022-0720-4>.
178. Singh, Balwant; Kumar, Raman; Chohan, Jasgurpreet; Sharma, Shubham; Singh, Jujhar; Ilyas, Rushdan Ahmad; Rangappa, Sanjay; Siengchin, Suchart; Naresh, Kakur; Raghu, Sowmya; James, Robin. Investigation of copper reinforced Acrylonitrile butadiene styrene and Nylon 6 based thermoplastic polymer nanocomposite filaments for 3D Printing of Electronic Components. *High Performance Polymers*. 2022. <https://doi.org/10.1177/09540083221112307>.
179. Shubham Sharma, P. Sudhakara, J Singh, RA Ilyas, MRM Asyraf, and MR Razman. Critical review of biodegradable and bioactive polymer composites for Bone Tissue Engineering and Drug Delivery applications. *Polymers* (MDPI). *Polymers* **2021**, *13*(16), 2623; <https://doi.org/10.3390/polym13162623>. **[Best Editor's Choice article in specific volume and issue]**
180. Abhinay Singh Rajawat, Sanjeev Singh, Brijesh Gangil, Lalit Ranakoti, Shubham Sharma, MRM Asyraf, M. R. Razman. Effect of Marbles dust on Mechanical, Morphological, and wear performance of Basalt Fibre Reinforced Epoxy Composites for structural applications. *Polymers* 2022, *14*(7), 1325; <https://doi.org/10.3390/polym14071325>.

181. Mohd Ahtesham Hussain Siddiqui, Shahzad Akhtar, Somnath Chattopadhyaya, Shubham Sharma, Mamdouh El Haj Assad, Jujhar Singh, Vivek Aggarwal, Shashi Prakash Dwivedi, Ambuj Saxena. Investigation of geo-mining green roof seismic energy balancing with resin bolting by Universal Drilling Machine: A novel energy-absorbing- based support system. 2021. *Arabian Journal of Geosciences* (Springer). 2022. 15, 431 (2022). <https://doi.org/10.1007/s12517-022-09594-2>.
182. Ab Hamid NH, bin Mohd Tahir MIH, Chowdhury A, Nordin AH, Alshaikh AA, Suid MA, Nazaruddin N'I, Nozaizeli ND, Sharma S, Rushdan AI. The Current State-Of-Art of Copper Removal from Wastewater: A Review. *Water*. 2022; 14(19):3086. <https://doi.org/10.3390/w14193086>.
183. Gurpreet Singh, Vivek Aggarwal, Sehijpal Singh, Balkar Singh, Shubham Sharma, Jujhar Singh, Changhe Li, RA Ilyas, Abdullah Mohamed. Experimental investigation and performance optimization during machining of Hastelloy C-276 using green lubricants. *Materials* (MDPI). 2022. *Materials* **2022**, 15(15), 5451; <https://doi.org/10.3390/ma15155451>.
184. Zechen Zhang, Menghua Sui, Changhe Li, Zongming Zhou, Bo Liu, Yun Chen, Zafar Said, Sujana Debnath, Shubham Sharma. Residual stress of grinding cemented carbide using MoS₂ nano-lubricant. *The International Journal of Advanced Manufacturing Technology* <https://doi.org/10.1007/s00170-022-08660-z>.
185. Tripathi, Varun, Somnath Chattopadhyaya, Alok K. Mukhopadhyay, Shubham Sharma, Changhe Li, Sunpreet Singh, Waqas U. Hussan, Bashir Salah, Waqas Saleem, and Abdullah Mohamed. 2022. "A Sustainable Productive Method for Enhancing Operational Excellence in Shop Floor Management for Industry 4.0 Using Hybrid Integration of Lean and Smart Manufacturing: An Ingenious Case Study" *Sustainability* 14, no. 12: 7452.

<https://doi.org/10.3390/su14127452>.

186. Ganeshkumar, S.; Singh, B.K.; Kumar, S.D.; Gokulkumar, S.; Sharma, S.; Mausam, K.; Li, C.; Zhang, Y.; Tag Eldin, E.M. Study of Wear, Stress and Vibration Characteristics of Silicon Carbide Tool Inserts and Nano Multi-Layered Titanium Nitride-Coated Cutting Tool Inserts in Turning of SS304 Steels. *Materials* **2022**, *15*, 7994. <https://doi.org/10.3390/ma15227994>.
187. Bhuvaneshwari, V.; Devarajan, B.; Arulmurugan, B.; Mahendran, R.; Rajkumar, S.; Sharma, S.; Mausam, K.; Li, C.; Eldin, E.T. A Critical Review on Hygrothermal and Sound Absorption Behavior of Natural-Fiber-Reinforced Polymer Composites. *Polymers* **2022**, *14*, 4727. <https://doi.org/10.3390/polym14214727>.
188. Sharma, T.; Singh, S.; Sharma, S.; Sharma, A.; Shukla, A.K.; Li, C.; Zhang, Y.; Eldin, E.M.T. Studies on the Utilization of Marble Dust, Bagasse Ash, and Paddy Straw Wastes to Improve the Mechanical Characteristics of Unfired Soil Blocks. *Sustainability* **2022**, *14*, 14522. <https://doi.org/10.3390/su142114522>.
189. Paul, S.; Chattopadhyaya, S.; Raina, A.K.; Sharma, S.; Li, C.; Zhang, Y.; Kumar, A.; Tag-Eldin, E. A Review on the Impact of High-Temperature Treatment on the Physico-Mechanical, Dynamic, and Thermal Properties of Granite. *Sustainability* **2022**, *14*, 14839. <https://doi.org/10.3390/su142214839>.
190. Bhushan, S.; Singh, S.; Maiti, T.K.; Sharma, C.; Dutt, D.; Sharma, S.; Li, C.; Tag Eldin, E.M. Scaffold Fabrication Techniques of Biomaterials for Bone Tissue Engineering: A Critical Review. *Bioengineering* **2022**, *9*, 728. <https://doi.org/10.3390/bioengineering9120728>.
191. Ranakoti, Lalit, Brijesh Gangil, Sandip K. Mishra, Tej Singh, Shubham Sharma, R.A. Ilyas, and Samah El-Khatib. 2022. "Critical Review on Polylactic Acid: Properties, Structure, Processing, Biocomposites, and Nanocomposites" *Materials* *15*, no. 12: 4312. <https://doi.org/10.3390/ma15124312>.
192. Haogang Li, Yanbin Zhang, Changhe Li, Zongming Zhou, Xiaolin Nie,

Yun Chen, Huajun Cao, Bo Liu, Naiqing Zhang, Zafar Said, Sujan Debnath, Muhammad Jamil, Hafiz Muhammad Ali, Shubham Sharma. Extreme pressure and antiwear additives for lubricant: academic insights and perspectives. *The International Journal of Advanced Manufacturing Technology*. 2022. <https://doi.org/10.1007/s00170-021-08614-x>.

193. Syreyshchikova, Nelli V., Danil Y. Pimenov, Munish K. Gupta, Krzysztof Nadolny, Khaled Giasin, Muhammad Aamir, and Shubham Sharma. 2021. "Relationship between Pressure and Output Parameters in Belt Grinding of Steels and Nickel Alloy" *Materials* 14, no. 16: 4704. <https://doi.org/10.3390/ma14164704>.

194. Âli Yurdun Orbak, Fikret Umut Aydın, Shubham Sharma, Jasgurpreet S. Chohan, S. Rajkumar. Identification of Factors Effecting Noise levels by using Data Mining and Design of Experiments analysis techniques: A novel experimental approach. *Journal of Low Frequency Noise, Vibration & Active Control*, 2022. <https://doi.org/10.1177/14613484221091076>.

195. Norfarhana, A.S., R.A. Ilyas, N. Ngadi, Shubham Sharma, Mohamed M. Sayed, A.S. El-Shafay, and A.H. Nordin. 2022. "Natural Fiber-Reinforced Thermoplastic ENR/PVC Composites as Potential Membrane Technology in Industrial Wastewater Treatment: A Review" *Polymers* 14, no. 12: 2432. <https://doi.org/10.3390/polym14122432>.

196. Dwivedi, Shashi Prakash, Pachauri, Praveen, Maurya, Manish, Saxena, Ambuj, Butola, Ravi, Sahu, Rohit and Sharma, Shubham. "Alumina catalyst waste utilization for aluminum-based composites using the friction stir process" *Materials Testing*, vol. 64, no. 4, 2022, pp. 533-540. <https://doi.org/10.1515/mt-2021-2074>.

197. Varun Tripathi, Somnath Chattopadhyaya, A.K. Mukhopadhyay, Suvandan Saraswat, Shubham Sharma, Changhe Li, S. Rajkumar. Development of a data-driven decision-making system using lean and smart manufacturing concept in industry 4.0: A case study.

Mathematical Problems in Engineering (Hindawi). 2021. Volume 2022 | Article

ID 3012215 | <https://doi.org/10.1155/2022/3012215>.

198. Asyraf, Muhammad R.M., Agusril Syamsir, Abu B.M. Supian, Fathoni Usman, Rushdan A. Ilyas, Norizan M. Nurazzi, Mohd N.F. Norrrahim, Muhammad R. Razman, Sharifah Z.S. Zakaria, Shubham Sharma, Zarina Itam, and Mohamad Z.A. Rashid. 2022. "Sugar Palm Fibre-Reinforced Polymer Composites: Influence of Chemical Treatments on Its Mechanical Properties" *Materials* 15, no. 11: 3852. <https://doi.org/10.3390/ma15113852>.
199. Lalita Chopra, Jasgurpreet Singh Chohan, Shubham Sharma, Aleksandra Kawala-Sterniuk, Maruisz Pelc. Multifunctional Modified Chitosan Biopolymers for Dual Applications in Biomedical and Industrial Field: Synthesis and Evaluation of Thermal, Chemical, Morphological, Structural, In-Vitro Drug-Release Rate, Swelling and Metal Uptake Studies. *Sensors* 2022, 22(9), 3454; <https://doi.org/10.3390/s22093454>.
200. Tiwary, Aditya K., Sandeep Singh, Raman Kumar, Jasgurpreet S. Chohan, Shubham Sharma, Jujhar Singh, Changhe Li, R. A. Ilyas, M. R.M. Asyraf, and Mohammad A. Malik. 2022. "Effects of Elevated Temperature on the Residual Behavior of Concrete Containing Marble Dust and Foundry Sand" *Materials* 15, no. 10: 3632. <https://doi.org/10.3390/ma15103632>.
201. Xifeng Wu, Changhe Li, Zongming Zhou, Xiaolin Nie, Yun Chen, Yanbin Zhang, Huajun Cao, Bo Liu, Naiqing Zhang, Zafar Said, Sujana Debnath, Muhammad Jamil, Hafiz Muhammad Ali & Shubham Sharma. Circulating purification of cutting fluid: an overview. *Int. J. Adv. Manuf. Technol.* (2021). <https://doi.org/10.1007/s00170-021-07854-1>.
202. Milad Sadeghzadeh, Bahram Ghorbani, Mohammad Hossein Ahmadi,

Shubham Sharma. A solar-driven plant to produce power, cooling, freshwater, and hot water for an industrial complex. *Energy Reports* 7 (2021), 5344-5358. <https://doi.org/10.1016/j.egyr.2021.08.168>.

203. Thind, Parteek S., Deepak Kumar, Sandeep Singh, Jasgurpreet S. Chohan, Raman Kumar, Shubham Sharma, Changhe Li, Gianpaolo Di Bona, Antonio Forcina, and Luca Silvestri. 2022. "Impact of Unsustainable Environmental Conditions Due to Vehicular Emissions on Associated Lifetime Cancer Risk in India: A Novel Approach" *International Journal of Environmental Research and Public Health* 19, no. 11: 6459. <https://doi.org/10.3390/ijerph19116459>.

204. Aditya Kumar Tiwary, Sakshi Bhatia, Sandeep Singh, Jasgurpreet Singh Chohan, Raman Kumar, Shubham Sharma, S. Chattopadhyaya, S. Rajkumar. Performance comparison and critical Finite element based experimental analysis of various forms of reinforcement retaining structural system. *Mathematical Problems in Engineering*. 2022. Volume 2022, Article ID 4434679, <https://doi.org/10.1155/2022/4434679>.
205. Vora, Jay, Vivek K. Patel, Seshasai Srinivasan, Rakesh Chaudhari, Danil Y. Pimenov, Khaled Giasin, and Shubham Sharma. 2021. "Optimization of Activated Tungsten Inert Gas Welding Process Parameters Using Heat Transfer Search Algorithm: With Experimental Validation Using Case Studies", *Metals* 11, No. 6: 981. <https://doi.org/10.3390/met11060981>.
206. Vora, Jay, Rakesh Chaudhari, Chintan Patel, Danil Y. Pimenov, Vivek K. Patel, Khaled Giasin, and Shubham Sharma. 2021., Experimental Investigations and Pareto Optimization of Fiber Laser Cutting Process of Ti6Al4V. *Metals* 2021, 11, 1461. <https://doi.org/10.3390/met11091461>.
207. Yadvinder Singh, Jujhar Singh, Shubham Sharma, Danil Yurievich Pimenov, Szymon Wojciechowski, Sunpreet Singh. Investigation of Process Parameters and Kerf Deviations during Laser machining of Coir fibre/Carbon fibre/Epoxy resin hybrid polymer composites using Grey Relational Analysis: Machining and Surface characterizations. 2021, *Polymer and Polymer Composites* (SAGE). [Paper communicated].
208. Dwivedi, Shashi Prakash, Pachauri, Praveen, Maurya, Manish, Saxena, Ambuj, Butola, Ravi, Sahu, Rohit and Sharma, Shubham. "Alumina catalyst waste utilization for aluminum-based composites using the friction stir process" *Materials Testing*, vol. 64, no. 4, 2022, pp. 533-540. <https://doi.org/10.1515/mt-2021-2074>.

209. Amer Aldawoud, Abdelsalam Aldawoud, Yashar Aryanfar, Mamdouh El Haj Assad, Shubham Sharma, Reza Alayi. Reducing PV Soiling and Condensation Using Hydrophobic Coating with Brush and Controllable Curtains. *International Journal of Low-Carbon Technologies*. 2022. **[Article accepted for publication]**.
210. Teng Gao, Yanbin Zhang, Changhe Li, Yiqi Wang, Qinglong An, Bo Liu, Zafar Said, Shubham Sharma. Grindability of carbon fiber reinforced polymer using CNT biological lubricant. *Scientific Reports (Nature)*. 11, Article number: 22535 (2021). <https://doi.org/10.1038/s41598-021-02071-y>.
211. Jasgurpreet Chohan, Raman Kumar, Aniket Yadav, Piyush Rohru, Sandeep Singh, Shubham Sharma, Changhe Li, Shashi Prakash Dwivedi, S. Rajkumar. Optimization of FDM printing process parameters on surface finish, thickness and outer dimension with ABS polymer specimens using Taguchi orthogonal array, and Genetic Algorithms. *Mathematical Problems in Engineering*. Article ID 2698845. Volume 2022, Article ID 2698845, 13 pages <https://doi.org/10.1155/2022/2698845>.
212. Tang, L., Zhang, Y., Li, C., Zhou, Z., Nie, X., Chen, Y., Cao, H., Liu, B., Zhang, N., Said, Z., Debnath, S., Jamil, M., Ali, H.M., Sharma, Shubham. Biological Stability of Water-Based Cutting Fluids: Progress and Application. *Chinese Journal of Mechanical Engineering*, 35, 3 (2022). <https://doi.org/10.1186/s10033-021-00667-z>.
213. M.N.M. Azlin, R.A. Ilyas, M.Y.M. Zuhri, S.M. Sapuan, M.M. Harussani, Shubham Sharma, A.H. Nordin, N. M. Nurazzi, and A. N. Afiqah. 3D Printing and Shaping Polymers, Composites and Nanocomposites-A review. 2021. *Polymers* **2022**, 14(1), 180; <https://doi.org/10.3390/polym14010180>.

214. Ambuj Saxena, Shashi Prakash Dwivedi, Anurag Dixit, Shubham Sharma, Ashish Kumar Srivastava, Nagendra Kumar Maurya. Computational and Experimental Investigation on Mechanical Behavior of zirconia toughened alumina and nickel Powder Reinforced EN31 Based Composite Material. Material Science and Engineering Technology, MAWE1189, <https://doi.org/10.1002/mawe.202000152>.
215. Varun Tripathi, Somnath Chattopadhyaya, Alok Kumar Mukhopadhyay, Shubham Sharma, Changhe Li, and Gianpaolo Di Bona. A Sustainable Methodology Using Lean and Smart Manufacturing for the Cleaner Production of Shop Floor Management in Industry 4.0. 2022, Mathematics (MDPI). 10(3):347. <https://doi.org/10.3390/math10030347>.
216. Teng Gao, Changhe Li, Yiqi Wang, Xueshu Liu, Qinglong An, Hao Nan Li, Yanbin Zhang, Huajun Cao Bo Liu, Dazhong Wang, Zafar Said, Sujana Debnath, Muhammad Jamil, Hafiz Muhammad Ali, Shubham Sharma. Carbon fiber reinforced polymer in drilling: From damage mechanisms to suppression. Composite Structures. 2022. <https://doi.org/10.1016/j.compstruct.2022.115232>.
217. Ansari, Md O., Somnath Chattopadhyaya, Joyjeet Ghose, Shubham Sharma, Drazan Kozak, Changhe Li, Szymon Wojciechowski, Shashi P. Dwivedi, Huseyin C. Kilinc, Jolanta B. Królczyk, and Dominik Walczak. 2022. "Productivity Enhancement by Prediction of Liquid Steel Breakout during Continuous Casting Process in Manufacturing of Steel Slabs in Steel Plant Using Artificial Neural Network with Backpropagation Algorithms" Materials 15, no. 2: 670. <https://doi.org/10.3390/ma15020670>.
218. Shailesh Kumar Singh, Somnath Chattopadhyaya, Alokesh Pramanik, Sanjeev Kumar, Shailesh M. Pandey, R.S. Walia, Shubham Sharma, Aqib

Mashood Khan, Shashi Prakash Dwivedi, Sunpreet Singh, Szymon Wojciechowski. Effect of alumina oxide nano-powder on the wear behaviour of CrN coating against cylinder liner using response surface methodology: processing and characterizations. *Journal of Materials Research and Technology (JMR&T)*. 2021. <https://doi.org/10.1016/j.jmrt.2021.12.062>.

219. S. Prabhakaran, Shubham Sharma, Akarsh Verma, SM Rangappa, S. Siengchin. Mechanical, Thermal and Acoustical studies on Natural Alternative Material for Partition Walls: A Novel Experimental Investigation. *Polymer Composites (Wiley)*. 2022. <https://doi.org/10.1002/pc.26723>.

220. Mingzheng LIU, Changhe LI, Yanbin ZHANG, Qinglong AN, Min YANG, Teng GAO, Cong MAO, Bo LIU, Huajun CAO, Xuefeng XU, Zafar SAID, Sujan DEBNATH, Muhammad JAMIL, Hafz Muhammad ALI, Shubham SHARMA. Cryogenic minimum quantity lubrication machining: from mechanism to application. *Front. Mech. Eng.*, 2021, 16(4): 649–697. <https://doi.org/10.1007/s11465-021-0654-2>.

221. Shashi Parkash Dwivedi, Manish Maurya, Shubham Sharma. Synthesis and characterisation of chromium, eggshell and grinding sludge-reinforced aluminium metal matrix composite: an experimental approach. 2021. *Green Materials (ICE Virtual)*. <https://doi.org/10.1680/jgrma.21.00035>.

222. Xiaoming Wang, Changhe Li, Yanbin Zhang, Zafar Said, Sujan Debnath, Shubham Sharma, Min Yang, Teng Gao. Influence of texture shape and arrangement on nanofluid minimum quantity lubrication turning. *International Journal of Advanced Manufacturing Technology* (2021). <https://doi.org/10.1007/s00170-021-08235-4>.

223. Shubham Sharma, Vikas Patyal, P. Sudhakara, Jujhar Singh, Michal Petru, and R.A. Ilyas. Mechanical, Morphological, and Fracture-deformation behavior of MWCNTs reinforced (Al-Cu-Mg-T351) alloy cast nanocomposites fabricated by optimized Mechanical milling and Powder metallurgy techniques. *Nanotechnology Reviews*. 2021. <https://doi.org/10.1515/ntrev-2022-0005>.
224. Vivek Aggarwal, Catalin Iulian Pruncu, Jujhar Singh, Shubham Sharma, Danil Yurievich Pimenov. Empirical investigations during WEDM of Ni-27Cu-3.15Al-2Fe-1.5Mn based superalloy using Response Surface Methodology for high temperature corrosion resistance applications. *Materials (MDPI) Journal*, 13, 3470 (1-18); DOI: <https://10.3390/ma13163470>.
225. Shubham Sharma, J Singh, Munish Kumar Gupta, Mozammel Mia, Shashi Prakash Dwivedi, Ambuj Saxena, S Chattopadhyaya, Rupinder Singh, Danil Yu Pimenov, ME Korkmaz. Investigation on Mechanical, tribological and Microstructural properties of Al-Mg-Si-T6/SiC/Muscovite-hybrid Metal-Matrix composites for high strength applications. *Journal of Materials Research and Technology (Elsevier)*, S2238-7854(21)00322-7. DOI: <https://doi.org/10.1016/j.jmrt.2021.03.095>.
226. A Saxena, SP Dwivedi, A Srivastava, Shubham Sharma, Nitin Kotkunde. A computational investigation on the influence of the l/d ratio and strain rate on the deformation behavior of rolled and homogeneous armor steel in the split Hopkinson pressure bar test process. **Part E: Journal of Process Mechanical Engineering (Sage)**. 2021, <https://doi.org/10.1177/09544089211036531>.
227. Selvaraj Karupusamy, Sundaram Maruthachalam, Suresh Mayilswamy, Shubham Sharma, Jujhar Singh, Giulio Lorenzini. Efficient

Computation for Localization and Navigation System for a Differential Drive Mobile Robot in Indoor and Outdoor Environments. 2021. *Revue d'Intelligence Artificielle*. <https://doi.org/10.18280/mmep.xxxxxx>.

228. Haogang Li, Yanbin Zhang, Change Li, Yongming Zhou, Xiaolin Nie, Yun Chen, Huajun Cao, Bo Liu, Naiqing Zhang, Zafar Said, Sujana Debnath, Muhammad Jamil, Hafiz Muhammad Ali & Shubham Sharma. Cutting fluid corrosion inhibitors from inorganic to organic: Progress and applications. *Korean Journal of Chemical Engineering* (2022). <https://doi.org/10.1007/s11814-021-1057-0>.
229. R.A. Ilyas; S.M. Sapuan; M.R.M. Asyraf; D.A.Z.N. Dayana; J.J.N. Amelia; M.S.A. Rani; Mohd Nor Faiz Norrrahim; N.M. Nurazzi; H.A. Aisyah; Shubham Sharma; M.R. Ishak; M. Rafidah; M.R. Razman. Polymer Composites Filled with Metal Derivatives: A Review of Flame Retardants, 2021, *Polymers* (MDPI), 13, 1701. <https://doi.org/10.3390/polym13111701>.
230. Pratap Singh, Rishi Pal Singh, Yudhvair Singh, Jasgurpreet Singh Chohan, Shubham Sharma, Milad Sadeghzadeh, Alibek Issakhov. Magnetic-induction technology based wireless sensors network for underground infrastructural, monitoring soil conditions, and Environmental observation applications: Challenges and Future aspects. *Journal of Sensors* (Hindawi). 2021, Volume 2022 | Article ID 9332917 | <https://doi.org/10.1155/2022/9332917>.
231. Ilyas RA, Zuhri MYM, Aisyah HA, Asyraf MRM, Hassan SA, Zainudin ES, Sapuan SM, Shubham Sharma, Bangar SP, Jumaidin R, Nawab Y, Faudzi AAM, Abrial H, Asrofi M, Syafri E, Sari NH. Natural Fiber-Reinforced Polylactic Acid, Polylactic Acid Blends and Their Composites for Advanced Applications. *Polymers*. 2022; 14(1):202. <https://doi.org/10.3390/polym14010202>.

232. Singh S, Khairandish MI, Razahi MM, Kumar R, Chohan JS, Tiwary A, Sharma Shubham, Li C, Ilyas RA, Asyraf MRM, Zakaria SZS. Preference Index of Sustainable Natural Fibers in Stone Matrix Asphalt Mixture Using Waste Marble. *Materials* (MDPI). 2022; 15(8):2729. <https://doi.org/10.3390/ma15082729>.
233. Shashi Prakash Dwivedi; Rajeev Agrawal; Shubham Sharma, Effect of Friction Stir Process Parameters on Mechanical Properties of Chrome Containing Leather Waste Reinforced Aluminium Based Composites, *International Journal of Precision Engineering and Manufacturing-Green Technology*. (2021). <https://doi.org/10.1007/s40684-021-00312-z>.
234. Hardeep Singh, Jujhar Singh, Shubham Sharma, SP Dwivedi, Ahmed J Obaid, Comparative Performance of Copper, Graphite, Brass and Aluminium/Graphite Based Different Tool Electrodes for Optimizing the Material Removal Rate during Die-Sinking EDM of Stir-Casted, Al6061/SiC MMCs for Sustainable Manufacturing and Energy Applications. *Journal of Green Engineering*, (2021), Volume-11, Issue-1, 2021, pp. 922-938.
235. Xin Cui, Changhe Li, Wenfeng Ding, Yun Chen, Cong Mao, Xuefeng Xu, Bo Liu, Dazhong Wang, Hao Nan Li, Yanbin Zhang, Zafar Said, Sujana Debnath, Muhammad Jamil, Hafiz Muhammad Ali, Shubham Sharma. Minimum quantity lubrication machining of aeronautical materials using carbon group nanolubricant: From mechanisms to application. *Chinese Journal of Aeronautics* (2021), doi: <https://doi.org/10.1016/j.cja.2021.08.011>.
236. Manish Kumar, Jitu Kujur, Rajeshwari Chatterjee, Somnath Chattopadhyaya, Shubham Sharma, Shashi Prakash Dwivedi, Ambuj Saxena, S. Rajkumar, Ashutosh Anand. Corrosion zones of rebar in high volume flyash concrete through potentiodynamic study in concrete powder solution extracts: A sustainable construction approach. *Advances*

in Civil Engineering. 2022. Volume 2022. Article ID 5927819.
<https://doi.org/10.1155/2022/5927819>.

237. Shubham Sharma, P. Sudhakara, Abdoulhdi Borhana, Jujhar Singh, Rushdan A. Ilyas, Recent trends and developments in Conducting Polymer Nanocomposites for Multifunctional applications, *Polymers* 2021, 13(17), 2898; <https://doi.org/10.3390/polym13172898>.
238. Shubham Sharma, J Singh, AJ Obaid, Vikas Patyal “Tool-Condition Monitoring in Turning Process of Fe-0.75Mn-0.51C Steel with Coated Metal Carbide Inserts using MultiSensor Fusion Strategy: A Statistical Analysis Based Ingenious Approach” *Journal of Green Engineering*, (2021), Volume-11, Issue-3, March 2021, pp. 2998-3013.
239. Shashi Prakash Dwivedi, Ambuj Saxena, Shubham Sharma, Gursharan Singh, Jujhar Singh, Mozammel Mia, Somnath Chattopadhyaya, Alokesh Pramanik, Danil Yu. Pimenov, Szymon Wojciechowski. Effect of Ball-Milling Process Parameters on Mechanical Properties of Al/Al₂O₃/Collagen Powder Composite using Statistical Approach. *Journal of Materials Research and Technology*, Volume 15, pp. 2918-2932. <https://doi.org/10.1016/j.jmrt.2021.09.082>.
240. Pankaj Singh Chandel, YK Tyagi, Kanishka Jha, Rajeev Kumar, Shubham Sharma, Jujhar Singh and RA Ilyas. Study of mode II interlaminar fracture toughness of laminated composites of glass and jute fibres in Epoxy for structural applications. *Functional Composites and Structures*, 3, (2021), 044002. <https://doi.org/10.1088/2631-6331/ac376e>.
241. R.A. Ilyas, H.A. Aisyah, A.H. Nordin, Norzita Ngadi, M.Y.M. Zuhri, M.R.M. Asyraf, S.M. Sapuan, E.S. Zainudin, Shubham Sharma, Hairul Abral, Mochamad Asrofi, Edi Syafri, Nasmi Herlina Sari, M. Rafidah, S.Z.S. Zakaria, M.R. Razman, N.A. Majid, Z. Ramli, Ashraf Azmi, S.P. Bangar, Rushdan Ibrahim. Natural Fiber Reinforced Chitosan, Chitosan Blends and Their Nanocomposites for Various Advanced Applications.

242. Kanishka Jha, Y.K. Tyagi, Rajeev Kumar, Shubham Sharma, MRM Huzaifah, Changhe Li, R.A. Ilyas, Shashi Prakash Dwivedi, Ambuj Saxena, Alokesh Pramanik. Assessment of Dimensional Stability, Biodegradability and Fracture Energy of Bio-Composites Reinforced with Novel Pine Cone for Biomedical applications. *Polymers* 2021, 13, 3260. <https://doi.org/10.3390/polym13193260>.
243. Yeswanth, IVS; Jha, Kanishk; Bhowmik, Shantanu; Kumar, Rajeev; Sharma, Shubham; Rushdan, Ahmad Ilyas. Recent developments in RAM based MWCNT composite materials: A short review. *Functional Composites and Structures*, 2022, <https://doi.org/10.1088/2631-6331/ac5730>.
244. Jasgurpreet Singh Chohan, Raman Kumar, Sandeep Singh, Shubham Sharma, R.A. Ilyas. A comprehensive review on applications of 3D printing in Natural fibers polymer composites for Biomedical applications. *Functional Composites and Structures*, 2022, <https://doi.org/10.1088/2631-6331/ac8658>.
245. Gurpreet Singh Virk, Balkar Singh, Yadvinder Singh, Shubham Sharma, R.A. Ilyas, Vikas Patyal. Abrasive Water Jet Machining of Coir Fiber Reinforced Epoxy Composites: - A Review. *Functional Composites and Structures*, 2022, <https://doi.org/10.1088/2631-6331/ac586c>.
246. Mohd. Ahtesham Hussain Siddiqui, Somnath Chattopadhyaya, Shubham Sharma, Mamdouh El Haj Assad, Changhe Li, Alokesh Pramanik, Huseyin Cagan Kilinc. Real-Time Comprehensive Energy Analysis of the LHD 811MK-V Machine with Mathematical Model

Validation and Empirical Study of Overheating: An Experimental Approach. 2021. Arabian Journal for Science and Engineering. DOI: 10.1007/s13369-021-06439-0.

247. M.R.M. Asyraf; Agusril Syamsir; N.M. Zahari; A.B.M. Supian; M.R. Ishak; S.M. Sapuan; Shubham Sharma; Ahmad Rashedi; M.R. Razman; S. Z. S. Zakaria; R.A. Ilyas; M.Z.A. Rashid. Product Development of Natural Fibre-Composites for Various Applications: Design for Sustainability. *Polymers* 2022, 14(5), 920; <https://doi.org/10.3390/polym14050920>.
248. Maruthachalam Sundaram, Jaganathan Chelladurai, Mouttouvelou Anand, P. Varunraj, Shubham Sharma, Mamdouh El Haj Assad. Performance Evaluation of Energy-Efficient Submersible Tubular Brushless Permanent Magnet Motor for Irrigation Applications. Arabian Journal for Science and Engineering (Springer). 2022. <https://doi.org/10.1007/s13369-022-06744-2>.
249. Yashar Aryanfar, Mamdouh El Haj Assad, Ali Khosravi, Rahman S.M. Atiqure, Shubham Sharma, Jorge Luis García Alcaraz, Reza Alayi. Energy, exergy, and economic analysis of combined solar ORC-VCC power plant. International Journal of Low-Carbon Technologies. 2021, ctab099, <https://doi.org/10.1093/ijlct/ctab099>.
250. Maruthachalam Sundaram, Mouttouvelou Anand, Jaganathan Chelladurai, P. Varunraj, SJ Smith, Shubham Sharma, Mamdouh El Haj Assad, Reza Alayi. Design and FEM Analysis of High-Torque Power Density Permanent Magnet Synchronous Motor (PMSM) for Two-Wheeler E-Vehicle Applications. International Transactions on Electrical Energy Systems. Article ID 1217250. 2022. (Article accepted for publication and is in Press).

251. Yadvinder Singh, Jujhar Singh, Shubham Sharma, Thanh-Danh Lam, Duc-Nam Nguyen. Fabrication and Characterization of Coir/Carbon-fiber reinforced Epoxy based Hybrid Composite for Helmet shells and sports-good applications: Influence of fiber surface modifications on the mechanical, thermal and morphological properties. *Journal of Materials Research and Technology* (Elsevier), PII:S2238-7854(20)31989-X, DOI: <https://doi.org/10.1016/j.jmrt.2020.11.023>, Reference: JMRTEC 2413.
252. Wojciech Kapłonek, Marzena Sutowska, Tadeusz Mikolajczyk, Danil Yurievich Pimenov, Munish Kumar Gupta, Mozammel Mia, Shubham Sharma, Karali Patra. High-accuracy 3D optical profilometry for analysis of surface condition of modern circulated coins. *Materials* (MDPI), Vol.13(23), <https://doi.org/10.3390/ma13235371>.
253. Hardeep Singh, Jujhar Singh, Shubham Sharma. Fabrication and Multi-objective Parametric Optimization of Surface Roughness on Al6061-SiC Metal Matrix Composite using different electrode materials during Die Sinking Electrical Discharge Machining. *Journal of Materials Research and Technology* (Elsevier) [Paper communicated].
254. Aqib Mashood Khan, Mohammed Alkahtani, Shubham Sharma, Muhammad Jamil, Asif Iqbal, Ning He. Sustainability-based holistic assessment and determination of optimal resource consumption for energy-efficient machining of hardened steel. *Journal of Cleaner Production*, 2021, <https://doi.org/10.1016/j.jclepro.2021.128674>.
255. A. Pramanik, A.K. Basak, C. Prakash, S. Shankar, Shubham Sharma, S. Narendranath. Recast layer formation during wire electrical discharge machining (WEDM) of titanium (Ti-Al6-V4) alloy. *Journal of Materials*

Engineering and Performance. 2021. <https://doi.org/10.1007/s11665-021-06116-1>.

256. Budukeremu Kadier, R.A. Ilyas, M.R.M. Huzaifah, Nani Hariastuti, S.M. Sapuan, M.M. Harussani, M.N.M. Azlin, Rustiana Yuliasni, R. Ibrahim, M.S.N. Atikah, Junying Wang, K. Chandrasekhar, M Amirul Islam, Shubham Sharma, Sneha Punia, Peng-Cheng Ma, M.R.M. Asyraf. Use of Industrial Wastes as Sustainable Nutrient Sources for Bacterial Cellulose (BC) Production: Mechanism, Advances, and Future Perspectives. *Polymers* 2021, 13(19), 3365; <https://doi.org/10.3390/polym13193365>.
257. Ranvijay Kumar, Nishant Ranjan, Vinay Kumar, Raman Kumar, Jasgurpreet Singh Chohan, Aniket Yadav, Piyush, Shubham Sharma, Chander Prakash, Sunpreet Singh, Changhe Li. Characterization of friction-stir welded poly-lactic-acid/aluminium composite primed through fused filament fabrication. 2021. *Journal of Materials Engineering and Performance*. <https://doi.org/10.1007/s11665-021-06329-4>.
258. Varun Tripathi, Somnath Chattopadhyaya, AK Mukhopadhyay, Shubham Sharma, Jujhar Singh, Danil Yurievich Pimenov, Khaled Giasin. An Innovative Agile Model of Smart Lean–Green Approach for Sustainability Enhancement in Industry 4.0. *J. Open Innov. Technol. Mark. Complex.* **2021**, 7(4), 215; <https://doi.org/10.3390/joitmc7040215>.

259. Tarun Sharma, Sandeep Singh, Prateek Singh, Jasgurpreet Singh Chohan, Raman Kumar, Shubham Sharma, Wojciech Kaplonek, Nima Khalilpoor, Alibek Issakhov. A Systematic Review on the Performance Characteristics of Sustainable, Unfired Admixed Soil-Blocks for Agricultural and Industrial Waste Management. *Advances in Materials Science and Engineering*. 2021. Volume 2021, Article ID 1749694, <https://doi.org/10.1155/2021/1749694>.
260. Yanen Wang, Yanen; Mushtaq, Ray Tahir; Ahmed, Ammar; Rehman, Mudassar; Khan, Aqib; Sharma, Shubham; Ishfaq, Kashif; Ali, Haider; Gueye, Thierno. Additive Manufacturing is sustainable technology: CiteSpace based Bibliometric investigations of Fused Deposition Modeling Approach. *Rapid Prototyping Journal*. 2021. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/RPJ-05-2021-0112>.
261. M.J. Suriani, R.A. Ilyas, M.Y.M. Zuhri, A. Khalina, M.T.H. Sultan, S.M. Sapuan, C.M. Ruzaidi, F. Nik Wan, F. Zulkifli, M.M. Harussani, M.A. Azman, F.S.M. Radzi, Shubham Sharma. Critical Review of Natural Fibre Reinforced Hybrid Composites: Processing, Properties, Applications and Costing. *Polymers*. 2021; 13(20):3514. <https://doi.org/10.3390/polym13203514>.
262. Shubham Sharma, AJ Obaid “Multi-response vibrational-signal analysis of a Cantilever Hollow rotating shaft by means of Non-contact Damage Detection based electromagnetic impulse approach using Fast Fourier Transform (FFT) and NV Gate software” *IOP Science-Journal of Physics* [Paper communicated].
263. Brajeshkumar Kishorilal Dinkar, A.K. Mukhopadhyay, Somnath Chattopadhyaya, Shubham Sharma, Firoz Alam, José Machado.

Statistical Reliability Assessment for Small Sample of Failure Data of Dumper Diesel Engines Based on Power Law Process and Maximum Likelihood Estimation. 2021, Applied Sciences (MDPI). *Appl. Sci.* 2021, 11(12), 5387; <https://doi.org/10.3390/app11125387>.

264. Shubham Sharma, AJ Obaid “Contact-mechanics and dynamics analysis of three-different ellipsoidal raceway geometries for deep Groove ball bearing using Abaqus 6.13 version FEA simulation for high load-bearing as well as speed-rotating applications” IOP Science-Journal of Physics [Paper communicated].
265. Jasgurpreet Singh Chohan, Nitin Mittal, Raman Kumar, Sandeep Singh, Shubham Sharma, J Singh, Kalagadda Venkateswara Rao, Mozammel Mia, Danil Yurievich Pimenov and Shashi Prakash Dwivedi “Mechanical Strength Enhancement of 3D Printed Acrylonitrile Butadiene Styrene Polymer components using Neural Network Optimization Algorithm” *Polymers* (MDPI), 2020, 12(10), 2250; <https://doi.org/10.3390/polym12102250>.
266. Somnath Chattopadhyaya, Brajeshkumar Kishorilal Dinkar, A.K. Mukhopadhyay, Shubham Sharma, José Machado. Meta-analysis and forest plots for Sustainability of heavy load carrier equipment used in industrial mining environment. 2021, *Sustainability* (MDPI), 2021, 13(15), 8672; <https://doi.org/10.3390/su13158672>.
267. Mandeep Singh, Shubham Sharma, A. Muniappan, Danil Yurievich Pimenov, Szymon Wojciechowski, Kanishka Jha, Shashi Prakash Dwivedi, Changhe Li, Jolanta Krolczyk, Dominik Walczak and Tien V.T. Nguyen. In-situ Micro-observation of Surface Roughness and Fracture Mechanism in Metal Micro-forming of Thin Copper sheets with newly developed Compact testing apparatus. *MATERIALS* (MDPI). *Materials* 2022, 15, 1368. <https://doi.org/10.3390/ma15041368>.

268. Partha Sarathi Ghosh, Abhishek Sen, Somnath Chattopadhyaya, Shubham Sharma, Jujhar Singh, Shashi Parkash Dwivedi, Ambuj Saxena, Aqib Mashood Khan, Danil Yurievich Pimenov, Khaled Giasin. Prediction of transient temperature distributions for laser-welding of dissimilar metals. 2021, Applied Sciences (MDPI). Appl. Sci. 2021, 11, 5829. <https://doi.org/10.3390/app11135829>.
269. M Mehta, J Singh, S Sharma “Availability Analysis of an Industrial System using Supplementary Variable Technique” Jordan Journal of Mechanical and Industrial Engineering (JJMIE), Volume 12, Number 4, December. 2018, pp. 245 – 251.
270. Gurbhej Singh, Hitesh Vasudev, Amit Bansal, Sachit Vardhan, Shubham sharma “Microwave cladding of Inconel-625 on mild steel substrate for corrosion protection” Materials Research Express. [DOI: <https://doi.org/10.1088/2053-1591/ab6fa3>].
271. S Sharma, AJ Obaid “Mathematical Modelling and Parametric optimization of Hard-facing to evaluate the optimal tribological parameters using Taguchi Orthogonal Array approach in Design of Experiments software” Journal of Interdisciplinary Mathematics [Paper in Press].
272. Prabhakaran Sivalingam, Krishnaraj Vijayan, Shubham Sharma, Hemashree Golla, Sunpreet Singh, Szymon Wojciechowski. Biodegradation Behaviour of Green Composite Sandwich made of Flax and Agglomerated Cork: An Experimental Characterization. 2021, Materials (MDPI). [Paper communicated].
273. M. Azizur Rahman, Md Md Shahnewaz Bhuiyan, Sourav Sharma, MS Kamal, MMM Imtiaz, A Alfaify, TT Nguyen, N Khanna, Shubham Sharma, MK Gupta, S Anwar, M Mia. “Influence of feed rate response (FRR) on

chip formation in micro and macro machining of Al alloy”. *Metals* (MDPI) 2021, 11(1), 159. <https://doi.org/10.3390/met11010159>.

274. Khare JM, Dahiya S, Gangil B, Ranakoti L, Sharma S, Huzaifah MRM, Ilyas RA, Dwivedi SP, Chattopadhyaya S, Kilinc HC, Li C. Comparative Analysis of Erosive Wear Behaviour of Epoxy, Polyester and Vinyl Esters Based Thermosetting Polymer Composites for Human Prosthetic Applications Using Taguchi Design. *Polymers*. 2021; 13(20):3607. <https://doi.org/10.3390/polym13203607>.
275. Shashi Prakash Dwivedi, Manish Maurya, Shubham Sharma. Study of CCLW, Alumina and the Mixture of Alumina- and CCLW reinforced Aluminum-Based Composite Material with and without Mechanical Alloying. *Journal of The Institution of Engineers (India): Series D*. 2021. <https://doi.org/10.1007/s40033-021-00312-y>.
276. Tiwary, A.K.; Singh, S.; Chohan, J.S.; Kumar, R.; Sharma, S.; Chattopadhyaya, S.; Abed, F.; Stepinac, M. Behavior of RC Beam–Column Joints Strengthened with Modified Reinforcement Techniques. *Sustainability* 2022, 14, 1918. <https://doi.org/10.3390/su14031918>.
277. Mandeep Singh, Shubham Sharma, Shashi Prakash Dwivedi, MK Gupta, Mozammel Mia, M. Azizur Rahman, Danil Yu Pimenov. Development of a Portable Universal Testing Machine (UTM) Compatible with 3D Laser-Confocal Microscope for Thin Materials. *Alexandria Engineering Journal* (Elsevier). [Paper communicated].
278. Balwant Singh, Raman Kumar, Jasgurpreet Singh Chohan, Shubham Sharma, Michal Petru, R.A. Ilyas. The Mechanical, Thermal, Electrical and Morphological properties of 3D Printed Copper reinforced ABS polymer composites for Engineering applications. 2021, *Nanomaterials* (MDPI). [Paper communicated].

279. Nelli Vladimirovna Syreyschikova, Danil Yurievich Pimenov, Munish Kumar Gupta, Krzysztof Nadolny, Khaled Giasin, Shubham Sharma. Establishing the Relationship between Cutting Speed and Output Parameters in Belt Grinding on Steels, Aluminum and Nickel Alloys: Development of Recommendations. 2021. *Materials* (MDPI). 14. 1974. [10.3390/ma14081974](https://doi.org/10.3390/ma14081974).
280. Yadvinder Singh, Jujhar Singh, Shubham Sharma, Vivek Aggarwal, Catalin Pruncu. Multi-objective optimization of Kerf-taper and Surface-roughness quality characteristics for cutting-operation on coir and carbon fibre reinforced epoxy hybrid polymeric composites during CO₂-Pulsed Laser-cutting using RSM. 2021. *Lasers in Manufacturing and Materials Processing* (Springer), 8(2), 157-182. <https://doi.org/10.1007/s40516-021-00142-6>.
281. Al-Tameemi, Hamza A.; Al-Dulaimi, Thamir; Awe, Michael O.; Sharma, Shubham; Pimenov, Danil Y.; Koklu, Ugur; Giasin, Khaled. 2021. "Evaluation of Cutting-Tool Coating on the Surface Roughness and Hole Dimensional Tolerances during Drilling of Al6061-T651 Alloy" *Materials* 14, no. 7: 1783. <https://doi.org/10.3390/ma14071783>.
282. Ambuj Saxena, Shashi Prakash Dwivedi, Shubham Sharma, Vishal Shankar Srivastava, Gursharan Singh, J Singh, Somnath Chattopadhyaya, Catalin Pruncu. A Comparative Numerical Analysis on the Effect of Welding consumables on the Ballistic resistance of SMAW joints of Armor steel. 2021. *Applied Sciences* [10.3390/app11083629](https://doi.org/10.3390/app11083629).

(MDPI), 2021, *11*, 3629.

283. Shubham Sharma, Peng Wei, Dong Xiaonan “Structural and Morphological analysis of solid state synthesized pure Lead Titanate and Calcium doped Lead Titanate ceramics for ferroelectric and piezoelectric

energy storage applications”, Key Engineering Materials, 837, 153–158.
<https://doi.org/10.4028/www.scientific.net/kem.837.153>.

284. Shubham Sharma, Xiao Nan Dong, Peng Wei, Chen Long, “Electrochemical deposited Cu-Ni binary and Cu-Ni-Mn ternary alloys from sulphate bath for anti-corrosive coating applications in Brine environment: Effect of Corrosion behaviour, Polarization studies, Morphological and structural characterizations”, Key Engineering Materials, 837, 102–108.
<https://doi.org/10.4028/www.scientific.net/kem.837.102>.
285. MohdAhteshamHussain Siddiqui, Sandeep K Pal, Nagesh Dewangan, Somnath Chattopadhyaya, Shubham Sharma, Saeed Nekoonam, Alibek Issakhov. Sludge formation analysis in Hydraulic oil of Load Haul Dumper 811 MK V machine running at elevated temperature for Bioenergy applications. International Journal of Chemical Engineering, **Vol. 2021, Article ID 4331809, 14 pages, 2021.** <https://doi.org/10.1155/2021/4331809>.
286. Jujhar Singh, Shubham Sharma, Abhinav Sharma, Amit Bansal, SK Mahla “Multi-response optimization of two modes Ultrasonic vibration assisted electric discharge machining process” Measurement and Control [Paper Communicated].
287. Shijun Guo, Shubham Sharma, Alibek Issakhov, and Nima Khalilpoor. Evaluation of the Safety of High-Salt Wastewater Treatment in Coal Chemical Industry Based on the AHP Fuzzy Method. Journal of Chemistry (Hindawi). Volume 2021. Article ID 7107058.
<https://doi.org/10.1155/2021/7107058>.
288. Kamal Kant Sharma, Akhil Gupta, Gagandeep Kaur, Raman Kumar, Jasgurpreet Singh Chohan, Shubham Sharma, Jujhar Singh, Nima Khalilpoor, Alibek Issakhov. Power quality and transient analysis for a

utility-tied interfaced distributed hybrid wind-hydro controls renewable energy generation system using generic and multiband power system stabilizers. [Energy Reports](#), [Volume 7](#), November 2021, Pages 5034-5044. <https://doi.org/10.1016/j.egyr.2021.08.031>.

289. Marzena Sutowska, Wojciech Kapłonek, Danil Yurievich Pimenov, Munish Kumar Gupta, Mozammel Mia, Shubham Sharma “Influence of variable radius of cutting head trajectory on quality of cutting kerf in the abrasive water jet process for soda-lime glass” *Materials* (MDPI) 2020, 13(19), 4277; <https://doi.org/10.3390/ma13194277>.
290. S Sharma, AJ Obaid “Mathematical Modelling, Analysis and Design of Fuzzy Logic controller for the Control of Ventilation Systems using MATLAB Fuzzy Logic Toolbox” *Journal of Interdisciplinary Mathematics*. 2020, DOI: [10.1080/09720502.2020.1727611](https://doi.org/10.1080/09720502.2020.1727611).
291. Shubham Sharma, P Sudhakara “Fabrication and optimization of hybrid AA-6082-T6 alloy/8%Al₂O₃(Alumina)/2%Grp metal matrix composites using novel Box-Behnken methodology processed by wire-sinking electric discharge machining” *Materials Research Express*. [DOI: <https://doi.org/10.1088/2053-1591/ab4b97>]
292. Jasgurpreet Singh Chohan, Raman Kumar, TH Bhatia Singh, Sandeep Singh, Shubham Sharma, J Singh, M Mia, DY Pimenov, S Chattopadhyaya, SP Dwivedi, W Kaplonek “Taguchi S/N and TOPSIS based optimization of Fused Deposition Modelling and Vapor Finishing Process for manufacturing of ABS plastic parts” *Materials* (MDPI), *Materials* 2020, 13(22), 5176; doi:10.3390/ma13225176.
293. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Catalin Iulian Pruncu, Danil Yu Pimenov, Kalagadda Venkateswara Rao. Comparative study on the Mechanical, Tribological, Morphological and Structural properties of vortex casting processed, Al-SiC-Cr hybrid metal

matrix composites for high strength wear-resistant applications: Fabrication and characterizations. *Journal of Materials Research and Technology (JMR&T) (Elsevier)*, S2238-7854(20)31860-3. DOI: <https://doi.org/10.1016/j.jmrt.2020.10.001>.

294. R.A. Ilyas, M.Y.M. Zuhri, Mohd Nor Faiz Norrrahim, Muhammad Syukri Mohamad Misenan, Mohd Azwan Jenol, Sani Amril Samsudin, N.M. Nurazzi, M.R.M. Asyraf, A.B.M. Supian, Sneha Punia Bangar, Nadlene Razali, Shubham Sharma, Abdoulhdi A. Borhana Omran. Natural Fiber Reinforced Polycaprolactone Green- and Hybrid-Biocomposites for Various Advanced Application. 2021. *Polymers (MDPI)*. *Polymers* **2022**, 14(1), 182; <https://doi.org/10.3390/polym14010182>.
295. Mandeep Singh, Shubham Sharma, Pradeep K Mishra, Sthitapragyan Maharana, Pragyansu Maharana, “Thermal performance and optimization of Paraffin wax as a Phase changing materials (PCM)-based heat sink with internal fins using ANSYS: An experimental analysis approach” *International Journal of Advanced Science and Technology- Science and Engineering Research Support Society, Vol. 29, Issue No. 3s, 2020, pp. 1990-2002. [Scopus, Q3]*.
296. S Sharma, AJ Obaid, J Singh “Mathematical Modeling and Simulation of a torque and pitch controller for horizontal axis wind turbine using MATLAB-SIMULINK version 8.2 for various energy sector applications” *Journal of Engg. Research (Kuwait University, Academic Publication Council) [Paper in press]*.
297. N.K. Mathew, S. Mayilswamy, [Shubham Sharma](#), N.A. Mehta, J. Kumar “Investigation of track based on Part Measurement” *MAPAN Journal of Metrology Society of India (Springer)*. <https://doi.org/10.1007/s12647-021-00480-y>.

298. Angelos P. Markopoulos, Nikolaos E. Karkalos, Mozammel Mia, Danil Yurievich Pimenov, Munish Kumar Gupta, Hussein Hegab, Navneet Khanna, Vincent A. Balogun, Shubham Sharma “Sustainability Assessment, Investigations and Modelling of Slot Milling Characteristics in Eco-benign Machining of Hardened Steel” *Metals (MDPI) Journal*. *Metals* **2020**, *10*(12), 1650; <https://doi.org/10.3390/met10121650>.
299. Suresh Mayilswamy, Narasimharaj Venugopal, Shubham Sharma, Arun Prasanth Nagalingam, Ahmed J. Obaid “Theoretical Analysis and Optimization of Process Parameters for Part Motion Time in Vibratory Part Feeders” *Journal of Engg. Research (Kuwait University, Academic Publication Council)* [Paper in press].
300. Piotr Jaskólski, Krzysztof Nadolny, Krzysztof Kukielka, Wojciech Kapłonek, Danil Yurievich Pimenov, Shubham Sharma “Dimensional analysis of workpieces machined using prototype device integrating 3D scanning, milling and shaped grinding” *Materials (MDPI)*, 2020, 13(24). <https://doi.org/10.3390/ma13245663>.
301. Wojciech Kapłonek, Krzysztof Nadolny, Bartosz Zieliński, Danil Yurievich Pimenov and Shubham Sharma “The role of observation-measurement methods in the surface characterizing of X39CR13 stainless steel cutting blades used in the fish processing industry” *Materials (MDPI)*, 2020, 13(24). <https://doi.org/10.3390/ma13245796>.
302. S Sharma, AJ Obaid “Optimal Design, Simulation and implementation of Solar Photo-voltaic Panels in Hybrid electric vehicles using CATIA V5R19 software integrated with ANSYS 13.0 versions” *IOP Science: Journal of Physics*, 1530 (2020), 012124. DOI:10.1088/1742-6596/1530/1/012124.

303. Mustafa Kuntoğlu, Abdullah Aslan, Danil Yurievich Pimenov, Üsame Ali Usca, Emin Salur, Munish Kumar Gupta, Tadeusz Mikolajczyk, Khaled Giasin, Wojciech Kapłonek and Shubham Sharma. A Review of Indirect Tool Condition Monitoring Systems and Decision-Making Methods in Turning: Critical Analysis and trends. *Sensors (MDPI)*, 2020, 21(1). <https://doi.org/10.3390/s21010108>.
304. Gursharan Singh, Shubham Sharma, Jujhar Singh, Som Kumar, Yadvinder Singh, Mohammad H Ahmadi, Alibek Issakhov. Optimization of performance, combustion and emission characteristics of acetylene aspirated diesel engine with oxygenated fuels: An Experimental approach. *Energy Reports*, Volume 7, 2021, pp. 1857-1874. <https://doi.org/10.1016/j.egyr.2021.03.022>.
305. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Mozammel Mia, J Singh, M. Azizur Rahman, Aqib Mashood Khan, Kalagadda Venkateswara Rao. Investigation on the Mechanical, Tribological, Morphological and Machinability behavior of stir-casted Al/SiC/Mo reinforced MMC's. *Journal of Materials Research & Technology (JMR&T, Elsevier)*. [JMRTEC2875- PII-S2238-7854(21)00260-X]. <https://doi.org/10.1016/j.jmrt.2021.03.034>.
306. Dhahri Maher, Aouinet Hana, Jamal Tabe Arjmand, Alibek Issakhov, Habib Sammouda, Mikhail Sheremet, Shubham Sharma. Effect of Inlet/Outlet on Thermal Performance of Naturally Ventilated Building. *International Journal of Low-Carbon Technologies*, 2021, 00, 1–15. <https://doi.org/10.1093/ijlct/ctab055>.
307. Shashi Prakash Dwivedi, Ambuj Saxena, Michal Petru, Shubham Sharma, Madhulika Mishra, Alokesh Pramanik, Sunpreet Singh, Changhe Li, RA Ilyas. Recovery of Cr from chrome containing leather wastes to develop Aluminum-based composite material along with Al₂O₃

ceramic particles: An ingenious approach. 2021. Nanotechnology Reviews [De Gruyter]. **[Accepted for Publication]**.

308. Shashi Dwivedi, Rohit Sahu, Ambuj Saxena, Vijay Kumar Dwivedi, Krovvidi Srinivas, Shubham Sharma. Recovery of Cr from chrome-containing leather waste and its utilization as reinforcement along with waste spent alumina catalyst and grinding sludge in AA 5052-based metal matrix composites. Part E: Journal of Process Mechanical Engineering. <https://doi.org/10.1177/09544089211038385>.
309. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma “Production and characterization of SiC and Ni reinforced AlSi alloy hybrid composites formulated through stir casting process” Arabian Journal of Engineering and Science (Springer) [Paper in press].
310. Shubham Sharma, N. Jayarambabu, Saraswathi Kailasa, K. Venkateswara Rao “Behaviour of thin-walled Carbon Fibre Reinforced Polymer composite tubular Structures for launch vehicle and spaceship applications: Experimental Design and Analysis” Arabian Journal of Engineering and Science (Springer) [Paper in press].
311. Mustafa Kuntoğlu, Abdullah Aslan, Danil Yurievich Pimenov, Khaled Giasin, Tadeusz Mikolajczyk, Shubham Sharma “Modeling of Cutting Parameters and Tool Geometry for Multi-Criteria Optimization of Surface Roughness and Vibration via Response Surface Methodology in Turning of AISI 5140 Steel” Materials (MDPI), 2020, 13(19), 4242; <https://doi.org/10.3390/ma13194242>.
312. Tripathi, Varun, Somnath Chattopadhyaya, Alok Bhadauria, Shubham Sharma, Changhe Li, Danil Y. Pimenov, Khaled Giasin, Sunpreet Singh, and Girish D. Gautam 2021. "An Agile System to Enhance Productivity through a Modified Value Stream Mapping

Approach in Industry 4.0: A Novel Approach" *Sustainability* 13, no. 21: 11997. <https://doi.org/10.3390/su132111997>.

313. Shubham Sharma, Jujhar Singh, Catalin Prunco, Gursharan Singh, Shalab Sharma "Modelling the Seismic behaviour of steel-concrete composite beams with steel columns throughout Non-linear finite element analysis" *Materials and Structures* (Springer) [Paper in press].
314. Parampreet Singh, Neel Kanth Grover, Vivek Agarwal, Shubham Sharma, Jujhar Singh, Milad Sadeghzadeh, Alibek Issakhov. Computational Fluid Dynamics Analysis of Impingement Heat Transfer and Turbulence in an Inline Array of Multiple Jets. *Mathematical Problems in Engineering*. Volume 2021, Article ID 6668942, 10 pages <https://doi.org/10.1155/2021/6668942>.
315. Shubham Sharma, Shalab Sharma, Mandeep Singh, Parampreet Singh, Rasmeet Singh, Sthitapragyan Maharana, Nima Khalilpoor, Alibek Issakhov. Computational Fluid Dynamics Analysis of Flow Patterns, Pressure Drop, and Heat Transfer Coefficient in Staggered and Inline Shell-Tube Heat Exchangers. *Mathematical Problems in Engineering*. Volume 2021, Article ID 6645128, 10 pages <https://doi.org/10.1155/2021/6645128>.
316. Huawei Xie, Shubham Sharma, Milad Sadeghzadeh, Alibek Issakhov. Dynamic Model and Numerical Simulation of Maximum Turbidity Zone Formation in River Inlet. *Advances in Civil Engineering*, 2021, **ID 2678692**. Volume 2021 | Article ID 2678692 | <https://doi.org/10.1155/2021/2678692>.
317. Gagandeep Kaur, Yadwinder Brar, Jaspreet Kaur, Akhil Gupta, Kamal Kant Sharma, Jasgurpreet Singh Chohan, Raman Kumar, Shubham Sharma, Somnath Chattopadhyaya, Shashi Prakash Dwivedi, Alibek

Issakhov, NimaKhalilpoor. Management of cattle dung and novel bioelectricity generation using Microbial fuel cells: An ingenious experimental approach. International Journal of Chemical Engineering, 2021, **ID 5536221**, Volume 2021 |Article ID 5536221 | <https://doi.org/10.1155/2021/5536221>.

318. Neeru Singla, Sandeep Singla, Parteek Singh Thind, Sandeep Singh, Jasgurpreet Singh Chohan, Raman Kumar, Shubham Sharma, Somnath Chattopadhyaya, Shashi Prakash Dwivedi, Ambuj Saxena, Alibek Issakhov, Nima Khalilpoor. Assessing the applicability of photocatalytic-concrete blocks in reducing the concentration of ambient NO₂ of Chandigarh, India using Box-Behnken Response surface design technique: A holistic sustainable development approach. Journal of Chemistry (Hindawi). Journal of Chemistry, vol. 2021, Article ID 6468749, 12 pages, 2021. <https://doi.org/10.1155/2021/6468749>.

319. Branesh Robert, Angeline Prabhavathy, Joanna P.S, Christopher Ezhil Singh, Sivaraj Murugan, Rajkumar S, Shubham Sharma. Flexural Behaviour of RC Beams with Circular Opening at the Flexural Zone and Shear Zone strengthened using Steel Plates. Advances in Civil Engineering, 2021, ID 6733402. Volume 2021 |Article ID 6733402 | <https://doi.org/10.1155/2021/6733402>

320. Kamal Kant Sharma, Akhil Gupta, Raman Kumar, JS Chohan, Shubham Sharma, J Singh, Nima Khalilpoor, Issakhov Alibek, S Chattopadhyaya, SP Dwivedi, "Economic evaluation of a Hybrid Renewable Energy system (HRES) using Hybrid Optimization Model for Electric Renewable (HOMER) software - A case study of rural India. International Journal of Low-Carbon Technologies, ctab012, 2021, 00, 1–8, <https://doi.org/10.1093/ijlct/ctab012>.

321. Sandeep Singh, JS Chohan, Raman Kumar, Shubham Sharma, J Singh, Nima Khalilpoor, Alibek Issakhov. Multi Objective Optimization of

Compaction Characteristics of Soil Stabilized with waste Marble Dust and Alccofine using Genetic Algorithm for sustainable environmental applications using MATLAB. *Advances in Materials Science and Engineering*. [Paper communicated].

322. Sandeep Singh, Parteek Thind, Dapinder Deep Singh, Arjun Sareen, Dheeraj Ahuja, Jasgurpreet Singh Chohan, Manpreet Kaur Verma, Raman Kumar, Shubham Sharma, Nima Khalilpoor, Alibek Issakhov. RSM-based optimization of the parameters affecting TiO₂-mediated UV photocatalysis of vehicular emissions in enclosed parking garages. *International Journal of Photoenergy*. Volume 2021, Article ID 9981068. <https://doi.org/10.1155/2021/9981068>.

323. Shashi Prakash Dwivedi, Manish Maurya, Ambuj Saxena, Shubham Sharma. Synthesis and Characterization of Spent Alumina Catalyst and Grinding Sludge Reinforced Aluminium-Based Composite Material. Part C: *Journal of Mechanical Engineering Science*. *Proc IMechE Part C: J Mechanical Engineering Science* 2021, Vol. 0(0) 1–12. DOI: 10.1177/09544062211061451.

324. Raman Kumar, Jasgurpreet S. Chohan, Sandeep Singh, Shubham Sharma, Yadvinder Singh, S. Rajkumar. Implementation of Taguchi and Genetic Algorithm techniques for prediction of optimal part dimensions for polymeric biocomposites in Fused Deposition Modeling. 2021. *International Journal of Biomaterials* (Hindawi-Wiley). Volume 2022, ID 4541450. <https://doi.org/10.1155/2022/4541450>

325. Anas Islam, Shashi Prakash Dwivedi, Vijay Kumar Dwivedi, Shubham Sharma, Dražan Kozak. Development of Marble Dust/Waste PET Based Polymer Composite Material for Environmental Sustainability: Fabrication and Characterizations. *Journal of Materials Performance and*

Characterization (ASTM International), 10, no. 1 (2021): 538–552.
<https://doi.org/10.1520/MPC20210034>.

326. Shubham Sharma, Mandeep Singh, Pradeep K Mishra, Pragyansu Maharana, Sthitapragyan Maharana “Design and Optimization of gating system to eradicate scabbing defects in manifold casting in foundry industries using L9 Taguchi orthogonal array in MINITAB 17.0” International Journal of Advanced Science and Technology-[Science and Engineering Research Support Society](#), Vol. 29, No. 3s, 2020, pp. 1974 - 1989 [**Scopus, Q3**].
327. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma “Processing Technologies and Interfacial Reactions of Silicon Carbide reinforced Aluminium Matrix Composites: A Review” Arabian Journal of Engineering and Science (Springer) [Paper in press].
328. Shashi Prakash Dwivedi, Ambuj Saxena, Shubham Sharma. Influence of nano-CuO on Synthesis and Mechanical Behaviour of Spent Alumina Catalyst and Grinding Sludge Reinforced Aluminium Based Composite. International Journal of Metal casting, 2021.
<https://doi.org/10.117/s40962-021-00597-5>.
329. Shashi Prakash Dwivedi, Ambuj Saxena, Ajay Kumar, Shubham Sharma. Extraction of Chromium from Leather Waste to Develop Aluminium Based Composite Material with Alumina Ceramic Particle. Material Science and Engineering Technology, 2021. [Paper in revisions].
330. Shubham Sharma, N. Jayarambabu, Saraswathi Kailasa, K. Venkateswara Rao “Behaviour of thin-walled Carbon Fibre Reinforced Polymer composite tubular Structures for launch vehicle and spaceship applications: Experimental Design and Analysis” Arabian Journal of Engineering and Science (Springer) [Paper in press].

331. S Sharma, J Singh, M Mehta, RN Muni, SK Mahla “Novel Design and Analysis of an Orbital pipes and tubes welding fixture using CAD software for various novel applications” *Measurement and Control - Sage Journal*. [Paper accepted after completing minor Revisions]
332. S Sharma, J Singh, H Kumar, V Agarwal, A Singh, N Jayarambabu, KV Rao “Utilization of rapid prototyping technology for the fabrication of an orthopedic shoe inserts for foot pain relieve using thermo-softening viscoelastic polymers: A novel experimental approach” *Measurement and Control - Sage Journal*. [<https://doi.org/10.1177/0020294019887194>].
333. Qureshi M.N., Shubham, Sharma, Jujhar Singh, Shaik Dawood A.K. “Evaluation of Surface Roughness in the turning of Mild Steel under different cutting conditions using back propagation Neural Network” *Proceedings of the Estonian Academy of Sciences*, 2020, 69, 2, 109–115 <https://doi.org/10.3176/proc.2020.2.02>.
334. P Sivalingam, K Vijayan, S Sharma, SK Mouleeswaran, JK Ramasamy, Z Redoune, “Experimental study on thermal and morphological analysis of Green composite sandwich made of Flax and agglomerated cork” *Journal of Thermal Analysis and Calorimetry-Springer Journal*, Volume 139, pages 3003–3012(2020). [SCI Indexed Journal]
335. S. Kailasa, B. Geeta, N. Jayarambabu, K.K.K. Reddy, S. Sharma, KV Rao, “Conductive Polyaniline Nanosheets (CPANINS) for Non-enzymatic Glucose sensor” *Materials Letters - Elsevier*, Vol.245, pages 118-121(2019). [SCI Indexed Journal]; [IF: 2.687].
DOI: 10.1016/j.matlet.2019.02.103.
336. H. Garg, R. Kumar, S. Sharma, “Mathematical modelling and Parametric Optimization for Tool Wear Rate of Hybrid Aluminum Metal Matrix Composite reinforced with SiCp and Grp” *International Journal on Emerging Technologies (Research Trend publisher)*, 10(2): 307-316(2019)

337. Rajeev Kumar, Manpreet Singh, Siddique Khan, Jujhar Singh, Shubham Sharma, Harish Kumar, JS Chohan. A state-of-the-art review on the misalignment, failure modes and its detection methods for bearings. MAPAN Journal of Metrology Society of India. [Paper communicated].
338. Harish K. Garg, Shubham Sharma*, Rajesh Kumar, Alakesh Manna, Changhe Li, Kuwar Mausam, and Elsayed Mohamed Tag Eldin*, “Multi-objective parametric optimization on the EDM machining of hybrid SiCp/Grp/Aluminum nanocomposites using Non-dominating Sorting Genetic Algorithm (NSGA-II): Fabrication and Microstructural Characterizations” Reviews on Advanced Materials Science (De Gruyter) 2022; 61: 1–24. <https://doi.org/10.1515/rams-2022-0279>.
339. S Sharma, J Singh, G Singh, A Sharma, S Sharma, N Jayarambabu, S Kailasa “Finite element Modelling & Simulation of hybrid structural element bolstered with Fiber Reinforced Polymer laminates using ANSYS” Measurement and Control - Sage Journal. [Paper accepted after completing minor Revisions]
340. Qureshi M.N., Shubham, Sharma, Jujhar Singh, Shaik Dawood A.K. “Hybrid Neural Network-Genetic Algorithm based modelling and optimization of machining parameters on the performance characteristics in the die-sink Electrical discharge machining” Advances in Mechanical Engineering – Sage Journal. [Paper communicated]
341. Rajeev Kumar, Jujhar Singh, Shubham Sharma, Changhe Li, G. Krolczyk, S. Wojciechowski. Neutrosophic Entropy-based ingenious measurement for Fast Fourier Transforms based classification of process-parameters and wear resistance of Friction-Stir processed hybrid AA7075- B4C Aluminium metal-matrix composites. Journal of Materials Research and Technology (JMR&T) (Elsevier), 2022. <https://doi.org/10.1016/j.jmrt.2022.07.026>.

342. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Munish Kumar Gupta. Multiple Performance Optimization of Reinforcement Contents while Formulating the Al-10SiC-Ni/Mo/Cr Hybrid Composites using Grey Relation Analysis. [Paper communicated].
343. M. Mehta, J. Singh, M. Singh, S. Sharma, "Optimizing Availability of Casting System using Genetic Algorithm Approach" International Journal of Production research – Taylor's and Francis. [Paper communicated]
344. Raman Kumar, Jasgurpreet Singh Chohan, Sandeep Singh, Shubham Sharma, Atul Babbar, Jujhar Singh, Vivek Aggarwal, S. Rajkumar. Investigations of process parameters of Plastic Jet Printing of polymeric biocomposites using Genetic Algorithm. International Journal of Mechanical Engineering. 2022. 7(2), pp. 230-237. <https://kalaharijournals.com/ijme-vol7-issue-feb2022.php>.
345. Jasgurpreet Singh Chohan, Raman Kumar, Sandeep Singh, Shubham Sharma, S. Rajkumar. Optimization and dimensional accuracy analysis using Genetic Algorithm of polymeric biocomposite parts fabricated by Fused filament fabrication. International Journal of Mechanical Engineering. 2022. 7(2), pp. 238-245. <https://kalaharijournals.com/ijme-vol7-issue-feb2022.php>
346. Jagpreet Singh, Nidhi Gautam, Gursharan Singh, Shubham Sharma, Jujhar Singh, Abhinav Sharma, Ahmed J. Obaid. Energy-efficient route-planning path selection for Electric vehicles. International Journal of Mechanical Engineering. 2022. 7(2), pp. 246-251. <https://kalaharijournals.com/ijme-vol7-issue-feb2022.php>.
347. Jasgurpreet Singh Chohan, Raman Kumar, Sandeep Singh, Shubham Sharma, Shashi Prakash Dwivedi, S. Rajkumar. Dimensional accuracy analysis of Material extrusion Additive manufacturing process for

polymeric biocomposites using Genetic Algorithm: A computational optimization approach. International Journal of Mechanical Engineering. 2022. 7(2), pp. 252-260. <https://kalaharijournals.com/ijme-vol7-issue-feb2022.php>.

348. U.K. Garg, C Sharma, H Garg, S Sharma, MH Ahmadi “Co-removal of Arsenic, Fluoride and Nitrate by Adsorption on Native Sand: Optimization, equilibrium and Kinetic Studies” Journal of Environmental Management – Elsevier Journal. [Communicated]
349. Shubham Sharma, A. Venkata Dhanunjaya Reddy, Sahil Kaundal, N. Vikram Manoj Kumar, SS Dawn, A Anitha “Comprehensive research on comparative evaluation of engine and combustion characteristics of a single-cylinder diesel engine fuelled with Diesel, methyl esters of Azadirachta indica vegetable oil biodiesel and its blends” World Review of Science, Technology and Sustainable Development (Inderscience). [Paper communicated]
350. Jatinder Singla, Sunil Kumar Mahla, Geetesh Goga, Neeru Singla, Shubham Sharma, Jujhar Singh, SS Dawn, A Anitha “Comparative analysis of a diesel engine powered by blends of diesel and castor oil methyl esters” World Review of Science, Technology and Sustainable Development (INDERSCIENCE). [Paper communicated]
351. R.N. Muni, J Singh, V Kumar, S Sharma, “Influence of rice husk ash, Cu, Mg on the mechanical behaviour of Aluminium Matrix hybrid composites” International Journal of Applied Engineering Research. (H-35 Index, SCOPUS Q3) [Accepted for publication]
352. R.N. Muni, J Singh, V Kumar, S Sharma, “Parametric Optimization of Rice Husk Ash, Copper, Magnesium reinforced Aluminium Matrix hybrid Composite processed by EDM” ARPN Journal of Engineering and Applied

Sciences, VOL. 14, NO. 22, November 2019. (H-17 Index, SCOPUS Q3)
[Accepted for publication]

353. R.N. Muni, J Singh, V Kumar, S Sharma, M Mehta “Assessment of Surface Roughness in EDM of RHA, Cu and Mg Reinforced Hybrid MMC using L27 Taguchi’s Orthogonal Array Technique” *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Volume-9 Issue-3, January 2020. [SCOPUS]. [DOI: 10.35940/ijitee.B7029.019320]
354. S. Nijjar, P. Sudhakara, S Saini, S Sharma, “Critical review on the recent developments in the properties, engineering and bio-medical applications of Natural Fibers Polymer Composites” *International Journal of Biological Macromolecules - Elsevier*. [Accepted for publication in April 2017]
355. G. Singh, S Sharma, A.V.D. Reddy, N.V.K. Kumar, “Criticality to investigate the performance characteristics of a four-stroke Diesel engine and further mitigate the effect of injection Pressures on performance and emissions characteristics of the diesel Engine with bio-diesel blend sources as a fuel” *Biofuels – Taylor’s and Francis*. [Accepted for publication in January 2018]
356. S Sharma, “Fabricate an Experimental set-up to investigate the performance of an Automobile car radiator by using Al/water Nanofluid” *Journal of Thermal Analysis & Calorimetry – Springer*, September 2018, Volume 133, Issue 3, pp 1387–1406. D.O.I.: 10.1007/s10973-018- 7224-9. [SCI Indexed Journal]
357. S Sharma, S Sharma, “Criticality of reducing shaft work & pressure level during evaporation as well as condensation in Refrigeration & Cooling system by using Solar Sorption Refrigeration Methods”, *Journal of Materials Science & Surface Engineering*, Vol. No. 05, Issue No. 07,

September 2017, pp 692-695. ISSN: 2348-8956, DOI-N: [10.jmsse/2348-8956/5-7.4](https://doi.org/10.1016/j.jmsse.2017.07.004).

358. S Sharma, S Sharma, “Critical Review on processing & properties of Magnesium Matrix Composites”, Journal of Materials Science & Surface Engineering, Vol. No. Vol. No. 05, Issue No. 07, September 2017, pp 696-700. ISSN: 2348-8956, DOI-N: [10.jmsse/2348-8956/5-7.5](https://doi.org/10.1016/j.jmsse.2017.07.005).
359. S Sharma, S Sharma, M Singh, “Fabricating an experimental set-up to understand the criticality of autonomous virtual intelligent vehicle with advanced DTMF technology features in flexible manufacturing system”, International Journal of Emerging Trends in Engineering & Technology, Vol. No. 04, Issue No. 07, July 2017, pp 175-190. ISSN: 2249-6149, DOI: [10.17632/IJETED/JULY2017/0015](https://doi.org/10.17632/IJETED/JULY2017/0015).
360. M Singh, S Sharma, S Sharma,” Criticality of Micro-Forming Process: A Review”, International Journal of Emerging Trends in Engineering & Technology, Vol. No. 04, Issue No. 07, July 2017, pp 191-198. ISSN: 2249-6149, DOI: [10.17632/IJETED/JULY2017/0016](https://doi.org/10.17632/IJETED/JULY2017/0016).
361. S Sharma, S Sharma “Some studies on investigating the concept of Optimizing Vulcanization of Rubber for effective Mechanical properties using Taguchi Method: An Experimental Approach” International Journal of Recent Scientific Research, Vol. No. 8, Issue No. 4. ISSN: 0976-3031, DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0804.0xxx>.
362. V Patyal, A Singla, G Singh, S Sharma “Fabricating an Experimental set-up to investigated Design and Development of Jet-Tester to check the Erosion Wear Behaviour of Coated and Uncoated SS304 at various Distinct angles” International Journal of Current Advanced Research,

Vol. No. 6, Issue No. 4, April 2017. ISSN (O): 2319-6475, ISSN (P): 2319-6505, DOI: <http://dx.doi.org/10.24327/ijcar.2017.2346.0005>.

363. S Sharma, S Sharma “Some studies on investigating the concept of determining the Thermal Conductivity of various Insulating Powders Materials by using Sphere in Sphere method” International Journal of Current Advanced Research, Vol. No. 6, Issue No. 3, March 2017. ISSN (O): 2319-6475, ISSN (P): 2319-6505, DOI: <http://dx.doi.org/10.24327/ijcar.2017.2346.0005>.
364. S Sharma, S Sharma “Some studies on investigating the concept of determine the Coefficient of Discharge for Triangular & Rectangular Notches with the variation of Depth of Water” International Journal of Current Advanced Research, Vol. No. 6, Issue No. 3, March 2017. ISSN (O): 2319-6475, ISSN (P): 2319-6505, DOI: <http://dx.doi.org/10.24327/ijcar.2017.2346.0005>.
365. S Sharma, S Sharma “Critical Review on an innovative approach to the Design of Lightweight Anthropomorphic Arm for Services Application 6(4)” International Journal of Engineering Sciences & Research Technology, Vol. No. 6, Issue No. 4, April 2017. ISSN: 2277-9655, DOI: 10.5281/zenodo.556355.
366. S Sharma, M Singh, S Sharma “Some studies on investigating the concept of performing experimentally EDM process parameters throughout the machining of High Carbon High Chromium D2 Tool Steel through a Taguchi Orthogonal Array approach” International Journal of Advance Research in Science and Engineering, Vol. No. 6, Issue No. 02, February 2017, pp 570-581. ISSN (O): 2319-8354, ISSN (P): 2319-8346, DOI: <http://conferenceworld.in/Conference.php?Cid=70>.

367. M Singh, S Sharma, S Sharma “A Review paper on Supersonic Unmanned Aerial Vehicle” International Journal of Advanced Technology in Engineering and Science, Vol. No. 5, Issue No. 02, February 2017, pp 517-521. ISSN: 2348-7550, DOI: <http://conferenceworld.in/Conference.php?Cid=70>.
368. S Sharma, P.S Bedi, S Sharma “Some studies on investigating the concept of representation & fabrication of Zinc oxide Nanoparticles of various sizes and Analysis of sample are done by Scanning Electron Microscope & X-Ray Diffraction” International Journal of Advance Research in Science and Engineering , Vol. No. 6, Issue No. 03, March 2017, pp 34-43. ISSN (O): 2319-8354, ISSN (P): 2319-8346, DOI: <http://conferenceworld.in/Conference.php?Cid=74>.
369. S Sharma, S Sharma “Some studies on investigating the concept of Micro-Electromechanical system based Piezo-Resistive Pressure Sensor” International Journal of Research in Advent Technology, Vol. No. 5, Issue No. 03, March 2017, pp 28-31. ISSN: 2321-9637.
370. S Sharma, H Garg, S Nijjar “Techniques for the Enhancement of Free or Natural Convection using Nanofluids - An Overview” International Journal of Advanced Technology in Engineering & Sciences, Vol. No. 5, Issue No. 04, April 2017. ISSN: 2348-7550, DOI: <http://conferenceworld.in/Conference.php?Cid=80>
371. V Patyal, G Singh, S Sharma “Some studies on investigating the concept of an effect of Impact Angle & Impact Rate on Slurry Erosion Behaviour & Mechanism of SS304” International Journal of Advance Research in Science and Engineering, Vol. No. 6, Issue No. 04, April 2017. ISSN (O): 2319-8354, ISSN (P): 2319-8346, DOI: <http://conferenceworld.in/Conference.php?Cid=80>

372. S Sharma, S Sharma “Criticality of Heat Treatment on the Properties Enhancement of Mild Steel” International Journal of Advanced Technology in Engineering and Science, Vol. No. 5, Issue No. 06, June 2017, pp 107-113. ISSN: 2348-7550, DOI: <http://conferenceworld.in/Conference.php?Cid=92>
373. V Patyal, S Sharma “Critical Review on Fabricating an Experimental Set-up to investigated the Development & Diagnostic Studies on Jet Tester Sources and Generation”, International Journal of Advance Research in Science & Engineering, Vol. No. 06, Issue No. 04, April 2017, pp 1000-1004. ISSN (O): 2319-8354, ISSN (P): 2319-8346, DOI: <http://conferenceworld.in/Conference.php?Cid=83>.
374. Garg, H., Singh, J., Kaushik, A., Sharma, S., Singh, J., & Singh, G. (2022). Overview of the KUKA robot language-based intelligent algorithms on industrial robots for multifaced medical and engineering applications: A modern approach to automation. International Journal of Health Sciences, 6(S3), 4222–4231. <https://doi.org/10.53730/ijhs.v6nS3.6771>
375. Sharma, S., Garg, H., Singh, J., Singh, J., Gautam, N., & Obaid, A. J. (2022). Critical review on the utilization of robotic-system point-to-point-based position actuators and laser sensors with artificial intelligence mediator in an archetypal mechatronics network for medical dermatology applications. International Journal of Health Sciences, 6(S1), 8074–8082. <https://doi.org/10.53730/ijhs.v6nS1.6776>
376. Anu, A., Gautam, N., Gautam, P. K., Singh, J., Sharma, S., Kaushik, A., & Obaid, A. J. (2022). Impact of post-COVID-19 on the hospitality tourism: Impact evaluation, survive, revive and thrive. *International Journal of Health Sciences*, 6(S2), 7152–7172. <https://doi.org/10.53730/ijhs.v6nS2.6780>.

INTERNATIONAL CONFERENCES

1. S Sharma, A Singh, M Kumar, “Some studies on investigating the concept of aspects, principles, phases or areas, challenges of Green Tribology along with the implementation of the Tribology in an Automobile Industry”, International Multi Track Conference on Sciences, Engineering & Technical Innovation organized by CT Group of Institutions in association with Punjab Technical University & Indian Space Research Organization on 22nd & 23rd May 2015, ISBN: 978-81929077-3-4.
2. N Mahay, RK Yadav, S Sharma, “Some studies on investigation for improving the Convection mode of Heat Transfer using Nanofluids: A Review”, 5th International Conference on Advancements in Engineering and Technology organized by Bhai Gurdas Institute of Engineering and Technology in association with Ministry of Human Resource and Development of India, Council of Scientific and Industrial Research, ISTE and Index by Thomson reuters, Scopus, IET Inspec, EBSCO, PROQUEST, Penn State University etc on 24th & 25th March 2017, ISBN:
3. S Sharma, M Singh, S Sharma “Some studies on investigating the concept of performing experimentally EDM process parameters throughout the machining of High Carbon High Chromium D2 Tool Steel through a Taguchi Orthogonal Array approach” 2nd International Conference on Latest Trends in Engineering, Science, Humanities & Management organized by Indian Federation of United Nations Association (IFUNA), New Delhi, on 26th February 2017, ISBN: 978-93-86171-31-3.
4. M Singh, S Sharma, S Sharma “A Review paper on Supersonic Unmanned Aerial Vehicle”, 2nd International Conference on Latest Trends in Engineering, Science, Humanities & Management

organized by Indian Federation of United Nations Association (IFUNA), New Delhi, on 26th February 2017, ISBN: 978-93-86171-31-3.

5. S Sharma, P.S Bedi, S Sharma “Some studies on investigating the concept of representation & fabrication of Zinc oxide Nanoparticles of various sizes and Analysis of sample are done by Scanning Electron Microscope & X-Ray Diffraction” International Conference on Emerging Trends in Engineering, Science & Management organized by Sphoorthy Engineering College in association with JNTU-H, NAAC, UGC on 17-18th March 2017, ISBN: 978-93-86171-32-0.
6. N Mahay, R.K Yadav, S Sharma “Fabricating Experimental set-up to study the effect of Titanium/Water Nanofluid Concentration on Heat Transfer and Fluid Flow Characteristics in a Single Pass Cross-Flow Compact Heat Exchanger” 5th International Conference on Recent Development in Engineering Science, Humanities and Management in association with Ministry of Human Resource Development Government of India (MHRD, Govt. of India) organized by National Institute of Technicals Teacher Training & Research (NITTTR), Chandigarh on 16th April 2017, ISBN: 978-93-86171-39-9.
7. S Sharma, H Garg, S Nijjar “Techniques for the Enhancement of Free or Natural Convection using Nanofluids - An Overview” 5th International Conference on Recent Development in Engineering Science, Humanities and Management in association with Ministry of Human Resource Development Government of India (MHRD, Govt. of India) organized by National Institute of Technicals Teacher Training & Research (NITTTR), Chandigarh on 16th April 2017, ISBN: 978-93-86171-39-9.
8. V Patyal, G Singh, S Sharma “Some studies on investigating the concept of an effect of Impact Angle & Impact Rate on Slurry

Erosion Behaviour & Mechanism of SS304” International Conference on Recent Development in Engineering Science, Humanities and Management in association with Ministry of Human Resource Development Government of India (MHRD, Govt. of India) organized by National Institute of Technicals Teacher Training & Research (NITTTR), Chandigarh on 16th April 2017, ISBN: 978-93-86171-39-9.

9. S Sharma, S Sharma “Criticality of Heat Treatment on the Properties Enhancement of Mild Steel” 4th International Conference on Innovative Trends in Science, Engineering and Management in association with MHRD Govt. of India organized by Centre for Development of Advanced Computing Juhu, Mumbai, Maharashtra (C-DAC, Mumbai) on 17th June 2017, ISBN: 978-93-86171-47-4.
10. V Patyal, S Sharma “Critical Review on Fabricating an Experimental Set-up to investigated the Development & Diagnostic Studies on Jet Tester Sources and Generation”, International Conference on Academic Research in Engineering & Management organized by Institution of Electronics and Telecommunication Engineers, Lodhi Road, Delhi on 30th April 2017, ISBN: 978-93-86171-43-6.
11. A Singh, M Singh, S Sharma “Vibrational Analysis on Rectangular Hollow Beam using ANSYS”, 3rd International Multi-track Conference on Sciences, Engineering and Technical Innovations organized by C.T. Group of Institutions in association with Computer Society of India & Punjab Technical University on 26th November 2017, ISBN: 978-81-929077-7-2.
12. S Sharma, P Sudhakara, A Singh “Novel Studies on the Synthesis & Wet Analysis of Smart Fluid in the Presence of Applied Magnetic Field with their Heat Transfer Characteristics & Rheological

Properties - A Critical Review”, 3rd International Multi-track Conference on Sciences, Engineering and Technical Innovations organized by C.T. Group of Institutions in association with Computer Society of India & Punjab Technical University on 26th November 2017, ISBN: 978-81-929077-7-2.

13. S Sharma, P. Sudhakara, Shishir Kumar Misra “Overview on Vacuum Assisted Resin Infusion Molding Technique: A Novel approach for advanced Composites fabrication for Aircraft and Automotive applications” International conference on International Conference on Research Developments in Applied Science, Engineering & Management (ASEM- 2018) organized by The Indian Council of Social Science Research (ICSSR), North West Regional Centre, Punjab University Campus, Chandigarh (India) on 18th March 2018. [Paper Accepted for publication].
14. S Sharma, P. Sudhakara, Sumit Nijjar, Sanjeev Saini, Gurpreet Singh “Recent Progress of Composite Materials in various Novel Engineering Applications” International Conference on Composite Materials: Manufacturing, Experimental Techniques, Modeling and Simulation (ICCMEMS-2018) organized by Lovely Professional University (L.P.U), Jalandhar-Delhi, G.T. Road, Phagwara on 15th-17th March 2018, Materials Today: Proceedings, Volume 5, Issue 14, Part 2, pp. 28195-28202. [ELSEVIER: Materials Today Conference Proceedings]: [Paper accepted for publication]
15. S Sharma, M Singh, D. Wei “Fabrication & Micro-structural properties of Al/SiC bulk metal matrix composite using Thermal spray technique - A Novel approach” **APCMP2018 - The 13th Asia-Pacific Conference on Materials Processing organized by**

The University of New South Wales, Australia on 24-27 August 2018. [Paper accepted for publication in either Machining Science and Technology Journal or International Journal of Abrasive Technology]

16. S Sharma, M Singh, D. Wei “Optimizing process parameters using L9 Taguchi orthogonal array for Electroforming Process on ABS component with 3-D Printing Technology” **APCMP2018 - The 13th Asia-Pacific Conference on Materials Processing organized by The University of New South Wales, Australia on 24-27 August 2018.** [Paper accepted for publication in either Machining Science and Technology Journal or International Journal of Abrasive Technology]

17. S Sharma, G Gupta, “Critical Experimentation of the Novel approach on the design & development of a Solar Panel with high improved efficiency” 4th National Symposium and 2nd International Symposium (4th TECHCON 2018 and 2nd ITECH 2018) "Innovation for Technology for Sustainable Economy" organized by Chalermprakit Building Siam Technology College, Bangkok on June 29, 2018. [Scopus & IEEE Explore publication, paper accepted for publication].

18. S Sharma, G Gupta, “Criticality of Solar Energy & Solar Thermal Energy Collector’s with Recent Advancements in Non-Conventional Energy Resources” 4th National Symposium and 2nd International Symposium (4th TECHCON 2018 and 2nd ITECH 2018) "Innovation for Technology for Sustainable Economy" organized by Chalermprakit Building Siam Technology College, Bangkok on

June 29, 2018. [Scopus & IEEE Explore publication, paper accepted for publication].

19. S Sharma, G Gupta, "Influence of Chopped Strand Mat Type E-Glass Fiber contents on the Morphological, Thermal, Physical, Mechanical and Electrical Properties of Unsaturated Polyester Resin in indoor and outdoor environmental conditions" 4th National Symposium and 2nd International Symposium (4th TECHCON 2018 and 2nd ITECH 2018) "Innovation for Technology for Sustainable Economy" organized by Chalermprakit Building Siam Technology College, Bangkok on June 29, 2018. [Scopus & IEEE Explore publication, paper accepted for publication].

20. S Sharma, G Gupta, "Experimentally Investigating the Tribology, Morphology & chemical properties of Hardfacing Alloys" 4th National Symposium and 2nd International Symposium (4th TECHCON 2018 and 2nd ITECH 2018) "Innovation for Technology for Sustainable Economy" organized by Chalermprakit Building Siam Technology College, Bangkok on June 29, 2018. [Scopus & IEEE Explore publication, paper accepted for publication].

21. S Sharma, G Gupta, "Effect of Rolling and Cryorolling under liquid nitrogen temperature on the morphological and mechanical properties of commercial bulk pure copper plate" 4th National Symposium and 2nd International Symposium (4th TECHCON 2018 and 2nd ITECH 2018) "Innovation for Technology for Sustainable Economy" organized by Chalermprakit Building Siam

Technology College, Bangkok on June 29, 2018. [Scopus & IEEE Explore publication, paper accepted for publication].

22. M Singh, D. Wei, S Sharma “Micro-structural aspects in fatigue analysis of a 3D printed Stainless steel (316l) plate” **Elsevier** - 12th International Conference on Fatigue Damage of Structural Materials **organized by** Double Tree, Hilton, Hyannis, Massachusetts, USA on 16-21 September 2018. [International Journal of Fatigue]: [Paper in communication].

26. V.R. Khullar, D.K. Pal, N. Gunjal and S Sharma “Experimental and CFD Analysis of Performance Characteristics of Centrifugal Pump” International Conference on Mechanical Engineering & Allied Sciences **organized by** School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, J&K on 14-15 September 2018. [Paper accepted for publication].

27. V.R. Khullar, Gurpreet Singh and S Sharma “Experimental investigation on effect of head and constant bucket splitter angle on the performance characteristics of a tangential flow Pelton turbine” International Conference on Mechanical Engineering & Allied Sciences **organized by** School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, J&K on 14-15 September 2018. [Paper accepted for publication].

28. S Sharma, A.V.D. Reddy, “Experimental investigation, comparison and modelling of flow rate from stratified two-phase flow region through horizontal pipe using CFD with Lockhart Martinelli Relation and Backer diagram” **International Conference on Waste, Energy and Environment (ICWEE-2018)** organized by Centre for Waste Management and Centre of Excellence for Energy

Research, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai, India on 5-7th September 2018. [Paper accepted for publication in Scopus Journal]

29. S Sharma, A.V.D. Reddy, “Modeling and Analysis of pitch controlled for Horizontal Axis Wind Turbine for power sector applications using MATLAB SIMULINK” **International Conference on Waste, Energy and Environment (ICWEE-2018)** organized by Centre for Waste Management and Centre of Excellence for Energy Research, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai, India on 5-7th September 2018. [Paper accepted for publication in Scopus Journal].
30. S Sharma, G Singh, A.V.D. Reddy, N.V.K. Kumar “Comparing the Performance Characteristics and Emissions of a base fuel diesel with Pongamia, Eucalyptus Oil & B40 Biodiesel Blends fuelled in a Single Cylinder Diesel Engine with Jatrophamethyl Ester waste” **International Conference on Waste, Energy and Environment (ICWEE-2018)** organized by Centre for Waste Management and Centre of Excellence for Energy Research, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai, India on 5-7th September 2018. [Paper accepted for publication in Scopus Journal].
31. S Sharma, A.V.D. Reddy, G Singh, N.V.K. Kumar “Comprehensive research on comparative evaluation of engine and combustion characteristics of a single-cylinder diesel engine fuelled with Diesel, methyl esters of Azadirachta indica vegetable oil biodiesel and its blends” **International Conference on Waste, Energy and Environment (ICWEE-2018)** organized by Centre for Waste Management and Centre of Excellence for Energy Research, Sathyabama Institute of Science and Technology, Jeppiaar Nagar,

Rajiv Gandhi Salai, Chennai, India on 5-7th September 2018.
[Paper accepted for publication in Scopus Journal].

32. S Sharma, A.V.D. Reddy, Saineeta, N. Jayarambabu “Template assisted electro-chemical synthesis and Micro-structural characterization of Copper and Copper selenide based polymer thin films as Micro/Nano Ensembles applications” International Conference on Nano Science & Engineering Applications-ICONSEA-2018 organized by Centre for Nano Science and Technology, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad during 4th to 6th October, 2018. [Paper accepted for publication either in Elsevier-Materials Today journal].

33. S Sharma, A.V.D. Reddy, N. Jayarambabu, Saineeta “Micro-structural, optical and Vibrational spectra analysis of PbS, Cadmium doped PbS and Strontium doped PbS nanostructured thin films synthesized through Successive Ionic Layer Adsorption and Reaction (SILAR) method for Solar cell and infrared detector sensor applications” International Conference on Nano Science & Engineering Applications-ICONSEA-2018 organized by Centre for Nano Science and Technology, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad during 4th to 6th October, 2018. [Paper accepted for publication either in Elsevier-Materials Today journal].

34. S Sharma, A.V.D. Reddy, N. Jayarambabu, Saineeta “Synthesis and characterization of various morphological properties, structural properties, chemical properties, optical properties and elemental identification analysis of Titanium dioxide nanopowder

for various novel applications” International Conference on Nano Science & Engineering Applications-ICONSEA-2018 organized by Centre for Nano Science and Technology, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad during 4th to 6th October, 2018. [Paper accepted for publication either in Elsevier-Materials Today journal].

35. S Sharma, H. Garg “Development and execution of KUKA robot language based intelligent algorithms on industrial robots to play electronic musical instruments with accuracy and effortless: A modern approach of Automation” Second International Conference on advancements in automation, robotics and sensing- organized by P.S.G. College of Technology, Coimbatore. [Paper accepted for Springer journal].

36. S Sharma, H. Garg “Effective utilization of robotics point to point based position actuators and laser sensors with artificial intelligence mediator in archetypal mechatronics network for dermatology applications” Second International Conference on advancements in automation, robotics and sensing- organized by P.S.G. College of Technology, Coimbatore. [Paper accepted for Springer journal].

37. S Sharma, J Singh, M Mehta, G Sahni, SK Mahla “Comprehensive research on comparing the engine performance and emission characteristics of diesel with fatty acid methyl ester of Pongamia Pinnata biodiesel blends fuelled in a single cylinder Kirloskar diesel engine” Second International Conference on advanced materials, energy and environmental sustainability (ICAMEES-2018) in automation, robotics and sensing- organized by University of

petroleum and energy resources, Uttarakhand during 14th-15th December, 2018. [Paper accepted for Elsevier: Materials Today journal].

38. S Sharma, P Sudhakara, S.K. Misra “Critical Review on Zero Liquid Discharge (ZLD) Technique: A Wastewater Treatment Process for the sustainable and Progressive Development of Leather and other Allied Chemical Industries" CHEMCON 2018, the 71 Annual Session of the Indian Institute of Chemical Engineers, Jalandhar, Punjab during 27th-30th December, 2018. [Paper accepted for publication]

41. N Jayarambabu, MSB Reddy, S Kailasa, KV Rao, S Sharma “Comparative study of Biological (*curcuma longa*) and chemical synthesized ZnO, CeO₂ and ZnO/CeO₂ nanoparticles on seedling growth parameters of Mung bean (*Vigna radiate L.*)” International Conference on Nano Science & Engineering Applications-ICONSEA-2018 organized by Centre for Nano Science and Technology, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad during 4th to 6th October, 2018. [Paper accepted for publication in Elsevier-Materials Today journal].

42. S Sharma, J Singh, N Jayarambabu, S Kailasa, KV Rao, A Sachdeva, A Sharma “Investigating the Morphological analysis of Nickel Nanoparticles thin films deposited on Sapphire substrate using the Electron beam evaporation technique” First International Conference on Materials Science and Engineering-ICMSE-2019 organized by Dr. BR Ambedkar National Institute of Technology, Jalandhar, Punjab (INDIA) during 11th to 12th June, 2019. [Paper

accepted for publication in Nanoscience and Technology: An International Journal].

43. S Sharma, J Singh, N Jayarambabu, KV Rao, A Sachdeva, G Singh, SK Mahla “Experimental analysis of symmetrical and phase identification structural properties of nanosize metamorphic aluminosilicate mineral ($Al_2O_3.SiO_2$)” 6th International Conference on Production & Industrial Engineering - CPIE 2019 organized by Dr. BR Ambedkar National Institute of Technology, Jalandhar, Punjab (INDIA) during 08th to 10th June, 2019. [Paper accepted for publication in Springer: Lasers in Manufacturing Materials Processing Journal].
44. S Sharma, S Sharma, J Singh, G Singh, A Sharma, V Agarwal, M Mehta, SK Mahla, G Singh, “Validation and Multi-response optimization of topological & geometrical parameters of Stainless steel cantilever Beam with Finite element analysis subjected to point load using Taguchi L9 Orthogonal array integrated with utility methodology” International Conference on functional materials, manufacturing and performances – ICFMMP 2019 organized by Lovely Professional University, Jalandhar, Punjab (INDIA) during 12th to 13th September, 2019, [Paper accepted for publication in Springer: Lecture series in Mechanical Engineering].
45. G Singh, V Agarwal, J Singh, A Singh, S Sharma, “Experimental Investigations on heat generation and Surface Roughness during orthogonal machining of Stainless Steel using bio based oil MQL” International Conference on functional materials, manufacturing and performances – ICFMMP 2019 organized by Lovely Professional University, Jalandhar, Punjab (INDIA) during 12th to 13th September, 2019, [Paper accepted for publication in Springer: Lecture series in Mechanical Engineering].

46. Y Singh, J Singh, S Sharma, A Sharma, JS Chouhan “Process Parameter Optimization in Laser Cutting of Coir Fiber Reinforced Epoxy Composite-A Review” 2nd Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano organized by Chandigarh University, Chandigarh, INDIA during 30th to 31th July, 2021, [Paper accepted for publication in Elsevier: Materials Today Proceedings].
47. SK Mahla, A Dhir, S Sharma, J Singh, M Mehta, “Effects of CNG flow rate on combustion, performance and emissions characteristics of biodiesel fuelled diesel engine” International Conference on functional materials, manufacturing and performances – ICFMMP 2019 organized by Lovely Professional University, Jalandhar, Punjab (INDIA) during 12th to 13th September, 2019, [Paper accepted for publication in Springer: Lecture series in Mechanical Engineering].
48. M Mehta, J Singh, S Sharma, “Deciding Maintenance of an Industrial system using Markov approach” 2nd International Conference on Future Learning Aspects of Mechanical Engineering (FLAME-2020) organized by Department of Mechanical Engineering, Amity School of Engineering & Technology, Amity University Uttar Pradesh, Noida during 5th – 7th August 2020, [Paper accepted for publication in Elsevier: Materials Today Proceedings].
49. Shubham Sharma, “Numerical Analysis of Al-6063/Tungsten Carbide (WC) Hybrid metal matrix composite (HMMC) as a Thermally Conducting Materials for higher temperature heat-transfer applications using ANSYS 14.0” 2020 International Conference on Advances in Material Science and Mechanical Engineering (ICAMSME-2020) organized by Department of Mechanical Engineering, N.B.K.R Institute of Science & Technology (Autonomous), Vidyanagar, Andhra Pradesh, India during 7-9

February 2020, [Paper communicated for publication either in Journal of Advances in Materials and Processing Technologies/Journal of Engineering Research (JER)/Materials Science Forum Journal only].

50. Shubham Sharma, P. Sudhakara, SK Misra, J. Singh “Thermo-Mechanical evaluation of differential calorimetric scanned factors for AD60 VHDPE polymer using OriginPro Lab TM Analysis tool version 8.5.1: A review comprising novel experimental optimization approach” International Conference of Modern Applications on Information and Communication Technology (ICMAICT) 22-23 October 2020, University of Babylon, Babylon-Hilla City, Iraq, IOP Science: Journal of Physics, 1804 (2021) 012148, DOI: <https://doi.org/10.1088/1742-6596/1804/1/012148>.
51. Dr. Ahmed J. Obaid, Prof. Dr. Salah Albermany, Kareem Abbas Alghurabi and Shubham Sharma, “Improving Extreme Learning Machine Accuracy Utilizing Genetic Algorithm for Intrusion Detection Purposes” Fifth International Conference on Research in Intelligent Computing in Engineering (RICE-2020) organized by Faculty of Technology and Engineering of the Thu Dau Mot University, Vietnam during 3rd-4th June, 2020. [Paper communicated for publication in Advances in Intelligent Systems and Computing, Springer Journal only].
52. Vivek Aggarwal, Gurpreet Singh, Jujhar Singh, Neelkanth Grover, Amoljit Singh Gill and Shubham Sharma, “Modeling and Optimization of machining Parameters during WEDM of Inconel 690 using Central Composite Design of RSM” International Conference on Industrial and Manufacturing Systems (CIMS - 2020) Organized by Department of Industrial & Production Engineering Dr BR Ambedkar National Institute of Technology Jalandhar, Punjab, INDIA during 26th – 28th June 2020. [Paper

communicated for publication in Springer/Emerald Insight/Apple Academic Press/Inderscience/Scientific.net Journal or book series only].

53. Gurpreet Singh, Sehijpal Singh, Vivek Aggarwal, Jujhar Singh, Neelkanth Grover, Amoljit Singh Gill and Shubham Sharma, “Ecological aspects of cutting fluids application in small scale industries of Northern Indian region: A Survey” International Conference on Industrial and Manufacturing Systems (CIMS - 2020) Organized by Department of Industrial & Production Engineering Dr BR Ambedkar National Institute of Technology Jalandhar, Punjab, INDIA during 26th – 28th June 2020. [Paper accepted for publication in Springer/Emerald Insight/Apple Academic Press/Inderscience/Scientific.net Journal or book series only].
54. Shubham Sharma, P Sudhakara, SK Misra, Jujhar Singh, “A comprehensive review of current development on the waste-reinforced polymer-matrix composites for automotive, sports goods and construction applications: materials, processes and properties” International Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano Materials - (SCPINM - 2019) organized by Chandigarh University, Punjab, India during 20–21 December 2019, <https://doi.org/10.1016/j.matpr.2020.06.523>. [Paper accepted for publication in Materials Today: Proceedings Elsevier Journal].
55. Shubham Sharma, Jujhar Singh, Vivek Aggarwal, Abhinav Sharma, Gursharan Singh, Shalab Sharma and Munish Mehta. Process Optimization and Thermomechanical Simulation of Residual Stresses and Temperature Distribution in the Laser-Beam Penetration Welds of 61Ni-21Cr-9Mo Alloy and 99.3Fe-0.45Mn-0.2C Steel Joints. 3rd International Conference on Inventive

Material Science Applications (ICIMA 2020) which will be held in PPG Institute of Technology, Coimbatore-641035, Tamil Nadu, India on June 18-19, 2020. AIP Conference Proceedings, 2281, 020033 (2020); <https://doi.org/10.1063/5.0026223>.

56. Vivek Aggarwal, Jujhar Singh, Shubham Sharma, Abhinav Sharma, Gursharan Singh, and Jwala Parshad. Empirical Modeling of Machining Parameters during WEDM of Inconel 690 using Response Surface Methodology. 3rd International Conference on Inventive Material Science Applications (ICIMA 2020) which will be held in PPG Institute of Technology, Coimbatore-641035, Tamil Nadu, India on June 18-19, 2020. AIP Conference Proceedings, 2281, 020032 (2020); <https://doi.org/10.1063/5.0027284>.
57. Vivek Aggarwal, Jujhar Singh, Shubham Sharma, Abhinav Sharma, Gursharan Singh, Jwala Parshad. An experimental study of wire breakage frequency on different electrodes during WEDM of Inconel-722. 5th International Conference on Materials and Manufacturing Engineering which will be held in Department of Mechanical Engineering, SCSVMV, Kancheepuram, Tamil Nadu, India on August 06-07, 2020. IOP Conference Series: Materials Science and Engineering. IOP Conf. Series: Materials Science and Engineering 954 (2020) 012013, IOP Publishing doi:10.1088/1757-899X/954/1/012013.
58. Shubham Sharma, P. Sudhakara, SK Misra. Utilization of plastic solid-wastes for value-added building-material applications: A holistic approach towards sustainable waste management. The 4th International Conference on Materials and Metallurgical Engineering and Technology (ICOMMET) which will be held in Surabaya – Indonesia, 19 October 2020. [Paper accepted for publication in AIP Conference Proceedings].

59. Shubham Sharma, P. Sudhakara, SK Misra, J Singh. Critical review on the Solid-wastes issue: Generation, Composition, Disposal and their recycling potential for various applications. International Conference of Modern Applications on Information and Communication Technology (ICMAICT) 22-23 October 2020, University of Babylon, Babylon-Hilla City, Iraq, IOP Science: Journal of Physics, 1804 (2021) 012147. DOI: <https://doi.org/10.1088/1742-6596/1804/1/012147>.
60. Hardeep Singh, Jujhar Singh, Shubham Sharma, Jasgurpreet Singh Chohan. Fabrication and Parametric Optimization of MRR & TWR of the Al6061/SiC MMCs processed during Die-Sinking Electrical Discharge Machining using different electrodes. 2nd Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano organized by Chandigarh University, Chandigarh, INDIA during 30th to 31th July, 2021, [Paper accepted for publication in Elsevier: Materials Today Proceedings].
61. Uday Kumar, Somnath Chattopadhyaya, AK Das, Ratnesh Kumar, Shubham Sharma, Kaori Nagai. Influence of laser power and welding speed on dendrite structure growth of low power pulsed laser welded super alloy. ICOTRIME2020: International Conference on Optimization Techniques and Recent Innovations in Mechanical Engineering organized by Krishna Engineering College, Ghaziabad, India during December 11-12, 2020, IOP Conf. Series: Materials Science and Engineering 1104 (2021) 012019. <https://doi.org/10.1088/1757-899X/1104/1/012019>.
62. Sajad Ahmad Dar; Jatinder Kumar; SHUBHAM SHARMA; Gursharan Singh; J Singh; Vivek Aggarwal; Jasgurpreet Singh Chohan; Raman Kumar; Abhinav Sharma; Madhulika Mishra; Ahmed J. Obaid. Investigations on the effect of electrical discharge machining process parameters on the machining behavior of

aluminium matrix composites. 2nd Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano organized by Chandigarh University, Chandigarh, INDIA during 30th to 31th July, 2021, Materials Today Proceedings.

DOI: [10.1016/J.MATPR.2021.07.126](https://doi.org/10.1016/J.MATPR.2021.07.126)

63. Gaurav Sharma; Jatinder Kumar; Shubham Sharma; Gursharan Singh; J Singh; Abhinav Sharma; Jaspurpreet Singh Chohan; Raman Kumar; Ahmed J. Obaid. Performance of diesel engine having waste heat recovery system fixed on stainless steel made exhaust gas pipe. 2nd Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano organized by Chandigarh University, Chandigarh, INDIA during 30th to 31th July, 2021, Materials Today Proceedings.

<https://doi.org/10.1016/j.matpr.2021.07.511>

64. R.A., Ilyas & Norizan, Mohd Nurazzi & Atiqah, A. & Mahamud, Atikah & Ibrahim, Rushdan & Norrrahim, Faiz & Asyraf, M. R. M. & Sharma, Shubham & Punia, Sneha & Syafri, Edi & herlina sari, Nasmi & Asrofi, Mochamad & Sapuan, S. (2021). Oxygen permeability properties of nanocellulose reinforced biopolymer nanocomposites. Materials Today: Proceedings. 1-6. 10.1016/j.matpr.2021.10.420.

65. Srivani Maddala, V.K., Sharma, Shubham, Chohan, J., Kumar, R., Singh, S. (2021). Green mining techniques to curb environmental problems - A review. Volume 889, 2021. 2nd Indo- European Conference on Sustainable Materials, Environment and Construction 23-24 September 2021, Mohali, India. IOP Conference Series: Earth and Environmental Science. 2021, 889(1), 012026.

66. Sarpreet Dadra, Jatinder Kumar, Satinderjit Singh, Taranvir Singh Saini, Shubham Sharma, Jasgurpreet Chohan, Raman Kumar and Sandeep Singh. Investigation on the influence of point loads on the deflection behaviour of G+5 frame structure. IOP Conference Series: Earth and Environmental Science, Volume 889, 2021 2nd Indo-European Conference on Sustainable Materials, Environment and Construction 23-24 September 2021, Mohali, India. *IOP Conf. Ser.: Earth Environ. Sci.* 889 012017.
67. Monika Mittal, Manoj Pareek, Shubham Sharma, Jasgurpreet Chohan, Raman Kumar and Sandeep Singh. A Sustainable environmental change and ESG initiatives by the manufacturing and others service Industries during COVID19 Pandemic. IOP Conference Series: Earth and Environmental Science, Volume 889, 2021 2nd Indo-European Conference on Sustainable Materials, Environment and Construction 23-24 September 2021, Mohali, India. *IOP Conf. Ser.: Earth Environ. Sci.* 889 012081.
68. Mamdouh El Haj Assad; Shubham Sharma; Ayman Ramadan; Mohammad AlShabi; Oussama Rejeb; Maryam Nooman AlMallahi. Effect of Organic Fluids on Geothermal Organic Rankine Cycle Performance, 2022, 4th HCT International Multiconferences Advances in Science and Engineering Technology (ASET) 21-24 February 2022, Dubai. IEEE XPLORE DIGITAL LIBRARY. 2022 *Advances in Science and Engineering Technology International Conferences (ASET)*, 2022, pp. 1-5, doi: 10.1109/ASET53988.2022.9735089.
69. Sumit Nijjar, P. Sudhakara, Shubham Sharma, Sanjeev Saini. Overview on the latest trend and development on Mechanical, Tribological & microstructural properties of Natural Fibre Polymer Composites. International Conference on Advances in Mechanical Engineering and Nano Technology (ICAMEN) 2022 to be held at

Manipal University Jaipur, India during February 18-19, 2022.
Materials Today Proceedings.
<https://doi.org/10.1016/j.matpr.2022.04.733>.

NATIONAL CONFERENCES

1. S Sharma, J Singh, N. Jayarambabu, C Prakash, S. Singh, A Sharma, H Kumar, “Effect of Intercritical Heat Treatment & volume fraction on the Morphological properties, Mechanical properties and Work Hardening behaviour of Dual Phase Steel”, National Conference on Advances in Mechanical Engineering on 16th March 2019 at NIT Delhi. [Paper Accepted for publication in LNME, Springer, Scopus/Web of Science indexed Journal].
2. C Prakash, S. Singh, S Sharma, J Singh, G Singh, M Mittal, H Kumar, “Fabrication of low elastic modulus Ti50Nb30HA20Alloy by Rapid Microwave Sintering Technique for Biomedical Applications”, National Conference on Advances in Mechanical Engineering on 16th March 2019 at NIT Delhi, Materials Today-Proceedings, Vol. 21, pp. 1713-1716.
3. C Prakash, S. Singh, S Sharma, J Singh, G Singh, “Fabrication of aluminium carbon nano tube silicon carbide particles-based hybrid nano-composite by spark plasma sintering”, National Conference on Advances in Mechanical Engineering on 16th March 2019 at NIT Delhi, Materials Today-Proceedings, Vol. 21, pp. 1637-1642.
4. S Sharma, R Viridi, “Some studies on investigating the concept of effect of machining parameters on tool life including chatter vibrations”, National Student Symposium, conference on Managing

Innovations in Science & Technology organized by CT Group of Institutions associated with AICTE on March 30 & 31, 2015 with Manuscript Reference number: MIST/P/19/15.

5. R Viridi, S Sharma “Some studies on investigating the concept of joining of two pipes without Casting or Welding”, National Student Symposium, conference on Managing Innovations in Science & Technology organized by CT Group of Institutions associated with AICTE on March 30 & 31, 2015 with Manuscript Reference number: MIST/P/20/15.
6. S Sharma, J Kumar, “Enhancement of Natural Convection using Nanofluids”, National Conference on Advances in Computer Science organized by GNA University on April 9th 2016 with Manuscript Reference number: ACS/2016/109.
7. S Sharma, H Garg, “Criticality of Nanofluids: an overview”, Recent Advances in Mechanical Engineering organized by Panipat Institute of Engineering and Technology (PIET) in association with AICTE, Kurukshetra University on 17th, 18th March, 2017, Vol. No. 1, 2017, pp: 49-56.
8. S Sharma, J Kumar, “Criticality of Carbon Nanotubes in Nanoscience & Nanotechnology and their Application as Reinforcement Composites”, 3rd National Conference on Engineering Applications-Accelerating Make in India (NCEA-2017) organized by St. Soldier Group of Institutions in association with AICTE & IKGPTU on 26th August, 2017.

9. S Sharma, J Kumar, "Criticality of Reducing Pressure Drop Characteristics & Enhancing Thermo-Physical Properties as well as Heat Transfer Characteristics in Compact Heat Exchanger by Using Nanofluids", 3rd National Conference on Engineering Applications-Accelerating Make in India (NCEA-2017) organized by St. Soldier Group of Institutions in association with AICTE & IKGPTU on 26th August, 2017.
10. AS Viridi, J Kumar, S Sharma, "Finite Element Method Analysis on an Automobile Suspension System", 3rd National Conference on Engineering Applications-Accelerating Make in India (NCEA-2017) organized by St. Soldier Group of Institutions in association with AICTE & IKGPTU on 26th August, 2017.
11. J Kumar, S Sharma, "Critical Study on Process Parameters of Stir Casting technique for fabrication of Metal Matrix Composites", 3rd National Conference on Engineering Applications-Accelerating Make in India (NCEA-2017) organized by St. Soldier Group of Institutions in association with AICTE & IKGPTU on 26th August, 2017.
12. S Sharma, V Patyal, A Dood, "Criticality of different Ferrography techniques used for the analysis of wear particle in machine tool & Paper/pulp industries - an advanced predictive maintenance", National Conference on Recent Developments in Mechanical Engineering and Modern Techniques (NCRDMEEMT'18) organized by Department of Mechanical Engineering, P.T. Lee Chengalvaraya Naicker Polytechnic College (A Govt. Aided Institution. Estd: 1939, (Formerly: C.N. Technical School (1886) & C.N. Industrial School (1906)), Vepey, Chennai on 2nd March 2018. ISBN: 978-93-81208-60-1.

13. Gursharan Singh, Abhinav Sharma, Shubham Sharma, Jujhar Singh, Nidhi Gautam, Jagpreet Singh, Talwinder Singh Bedi, Ahmed Jabbar Obaid. A critical overview on performance improvement and design optimization of Solar-assisted air-heater. National Conference on Advanced Research in Engineering, Science, and Technology (NCAREST-2022) organized by Department of Mechanical Engineering, Desh Bhagat University on 24-25th February 2022.
14. Abhinav Sharma, Shubham Sharma, Jujhar Singh, Gursharan Singh, Nidhi Gautam, Jagpreet Singh, Talwinder Singh Bedi, Ahmed Jabbar Obaid. An Overview on the significant progress on Carbon-fiber polymeric composites. National Conference on Advanced Research in Engineering, Science, and Technology (NCAREST-2022) organized by Department of Mechanical Engineering, Desh Bhagat University on 24-25th February 2022.
15. Abhinav Sharma, Shubham Sharma, Jujhar Singh, Gursharan Singh, Nidhi Gautam, Jagpreet Singh, Talwinder Singh Bedi, Ahmed Jabbar Obaid. Electromagnetic-radiation in processing of advanced materials for industrial applications: A Critique. National Conference on Advanced Research in Engineering, Science, and Technology (NCAREST-2022) organized by Department of Mechanical Engineering, Desh Bhagat University on 24-25th February 2022.
16. Shubham Sharma, Jujhar Singh, Abhinav Sharma, Gursharan Singh, Nidhi Gautam, Jagpreet Singh, Talwinder Singh Bedi, Ahmed Jabbar Obaid. Introductory glance on Bi-metallic oxide Composite materials and its contamination scavenging characteristics. National Conference on Advanced Research in Engineering, Science, and Technology (NCAREST-2022) organized

by Department of Mechanical Engineering, Desh Bhagat University on 24-25th February 2022.

17. Gursharan Singh, Abhinav Sharma, Shubham Sharma, Jujhar Singh, Nidhi Gautam, Jagpreet Singh, Talwinder Singh Bedi, Ahmed Jabbar Obaid. Overview on recent developments on Glass fiber composites. National Conference on Advanced Research in Engineering, Science, and Technology (NCAREST-2022) organized by Department of Mechanical Engineering, Desh Bhagat University on 24-25th February 2022.

BOOK CHAPTERS:

1. S Sharma, P. Sudhakara and O.S. Nirmal Ghosh, “Conducting Polymers in Power sector Applications” for a Book Volume “High Performance Polymers and Engineering Plastics” 2018, *Springer Nature*, Switzerland [Paper accepted].
2. S Sharma, P. Sudhakara, O.S. Nirmal Ghosh, A.B. Samui, “Polymer Nano-composites for electrical and electronic applications” for a Book Volume “High Performance Polymers and Engineering Plastics” 2018, *Springer Nature*, Switzerland. [Paper accepted]
3. S Sharma, A.V.D. Reddy, “Validation and Multi-response optimization of topological & geometrical parameters of Stainless-steel cantilever Beam with Finite element analysis subjected to point load using Taguchi L9 Orthogonal array integrated with utility methodology” 2018, Springer Lecture series in Mechanical Engineering. [Paper accepted]

4. S Sharma, A.V.D. Reddy, “Investigating an effect of Process parameters, Design Parameters and metallurgical characterization on the Shear Strength of AISI SS304 Resistance Spot Welded sheet using Taguchi method” 2018, *Springer Lecture series in Mechanical Engineering*. [Paper accepted]
5. S Sharma, P. Sudhakar, A.V.D. Reddy, Shalab Sharma, Sahil Sharma, “Comparison of compressive strength and stress behaviour of cylindrical and square concrete cubes externally confined with Glass Fiber Reinforced Polymer sheets using ANSYS” 2018, Springer Lecture series in Mechanical Engineering. [Paper accepted]
6. S Sharma, G Singh, N Jayarambabu, G Sahni, “Design optimization of Metal Inert Gas welding parameters for recuperating an ultimate tensile strength of AISI SS304 using L9 Taguchi orthogonal array” 2018, CRC Press/Balkema (Taylor & Francis). [ISBN: 978-1-138-60427-8, Handbook & ISBN: 978-0-429-46860-5, Ebook]
7. S Sharma, G Singh, A Singh, “Parametric Optimization of Mechanical Properties during Friction Stir Welding of AL-6063” 2018, CRC Press/Balkema (Taylor & Francis).[ISBN: 978-1-138-60427-8, Handbook & ISBN: 978-0-429-46860-5, E-book]
8. S Sharma, S Sharma, M Sharma, M Sundaram, T Jishnu, “Novel utilization of Machine Vision Technology in Pattern Matching operation & Blob Analysis on Image Processing Inspector for automation and robotics applications” 2018, CRC Press/Balkema (Taylor & Francis). [ISBN: 978-1-138-60427-8, Handbook & ISBN: 978-0-429-46860-5, E-book]
9. S Sharma, M Sundaram, S Prabhakaran, T Jishnu, “Design and Analysis of Autonomous Cleaning Robot for Large Scale Solar PV

- Farms” 2018, CRC Press/Balkema (Taylor & Francis). [ISBN: 978-1-138-60427-8, Handbook & ISBN: 978-0-429-46860-5, E-book]
10. S Sharma, M Sundaram, M Mohanraj, P Varunraj, T Dinesh Kumar, “FEA Based Electromagnetic Analysis of Induction Motor Rotor Bars with Improved Starting Torque for Traction Applications” 2018, CRC Press/Balkema (Taylor & Francis). [ISBN: 978-1-138-60427-8, Handbook & ISBN: 978-0-429-46860-5, E- book]
 11. S Sharma, J Singh, S Kaundal, S Sharma, “Influence of fast spheroidizing annealing process on Mechanical, optical, thermal and microstructural properties of cast steel samples” 2018, Lecture Notes in Mechanical Engineering (Springer). [Paper accepted]
 12. S Sharma, M Singh, N Jayarambabu, KV Rao, AVD Reddy, J Singh, “Investigation of Properties of Mg and Al Based Nano Hybrid-Metallic Composites Processed Through Liquid Processing Technique” 2018, Lecture Notes in Mechanical Engineering (Springer). [Paper accepted]
 13. Gursharan Singh, Shubham Sharma, Jujhar Singh, Vivek Aggarwal, Suresh Mayilswamy, “Influence of nickel-based cladding on the Hardness and wear behavior of hard-faced mild steel using E-7014 electrode using Shielded Metal Arc Welding” 2020, CRC Press-Taylor & Francis. <https://www.crcpress.com/Green-Engineering-and-Technology-Concepts-and-Applications/book-series/CRC-ETCA>. ISBN: 978-0-367-52106-6 (hbk); ISBN: 978-1-003-05654-6 (ebk)
 14. Jai Inder Preet Singh, Sehijpal Singh, Vikas Dhawan, Piyush Gulati, Rajeev Kumar, Manpreet Singh, Jujhar Singh, Shubham Sharma, Suresh Mayilswamy, “Optimization of machining parameters during the drilling of natural fiber reinforced polymer composites: A Critical Review” 2020, CRC Press-Taylor & Francis.

<https://www.crcpress.com/Green-Engineering-and-Technology-Concepts-and-Applications/book-series/CRCG-ETCA>. ISBN: 978-0-367-52106-6 (hbk); ISBN: 978-1-003-05654-6 (ebk)

15. Gursharan Singh, Jujhar Singh, Shubham Sharma, Suresh Mayilswamy, "Parametric optimization of surface roughness and surface temperature during Minimum Quantity Lubrication (MQL) and conventional flood lubrication techniques in surface grinding of mild steel: A performance comparison and analysis" 2020, CRC Press-Taylor & Francis. <https://www.crcpress.com/Green-Engineering-and-Technology-Concepts-and-Applications/book-series/CRCG-ETCA>. ISBN: 978-0-367-52106-6 (hbk); ISBN: 978-1-003-05654-6 (ebk).
16. Jatinder Kumar, Dilbag Singh, Nirmal S. Kalsi, Shubham Sharma, Munish Kumar Gupta. Influence of Reinforcement Contents and Turning Parameters on the Machining Behaviour of Al/SiC/Cr Hybrid Aluminium Matrix Composites. *Advances in Manufacturing technologies-Springer* [Paper accepted].
17. Sukhdeep Singh, Jasgurpreet Singh Chohan, Gurpreet Singh, Shubham Sharma, Munish Gupta. A comprehensive review on composite materials, applications and future challenges of friction welding. *Advances in Manufacturing technologies-Springer*. [Paper accepted]

BOOKS AUTHORED:

1. S Sharma, J Singh, "Design and Analysis of Multipurpose punch press machine of 0.89 Ton", Lambert Academic Publishing, 2018 [ISBN: 978-613-9-98069-7]
2. V Agarwal, J Singh, S Sharma, B Goel, "Empirical Investigations on Inconel 601 using Wire Electric Discharge Machine", NOVA Science Publishers Inc. (USA), 2020. [ISBN: 978-1-53618-760-1] Link:

<https://novapublishers.com/shop/empirical-investigations-on-inconel-601-using-wire-electric-discharge-machine/>

3. J Singh, S Sharma, “Optimization of process and operating parameters of H11 Die steel using L18 Taguchi Orthogonal Array processed through EDM”, Nova Academic Publishing, 2018 [Book in press].
4. B Bora, S Chattopadhyaya, S Sharma, “Experimental investigation and Parametric Optimization of Friction Stir Welding on Aluminium Alloy 6061-T6”, NOVA Science Publishers Inc. (USA), 2022. **Series:** [Mechanical Engineering Theory and Applications](#). **BISAC:** TEC020000; TEC021030. **DOI:** <https://doi.org/10.52305/QWFC7491>. ISBN: 978-1-68507-674-0. Link: <https://novapublishers.com/shop/experimental-investigation-and-parametric-optimization-of-friction-stir-welding-on-aluminium-alloy-6061-t6/>.
5. Sujoy De, S Chattopadhyaya, M. Srivastava, Shubham Sharma, Changhe Li, “A comparative study on Numerical Modelling of Pulsating water jet machining process”, Nova Academic Publishing, 2018 [Book in press].

GUEST EDITOR IN SCI/SCI-E/ESCI with Scopus Journals:

1. I have successfully edited book as a Guest-Editor covering 159 papers (Both original articles, review and mini articles) based upon Materials science and Engg., Energy resources, Computational optimization and Modelling techniques etc themes from the, “Imam Al-Kadhumi International Conference for Modern Applications of Information and Communication Technology (MAICT)” for the publication in the IOP Science: Journal of Physics. **Book DOI details:** [2020 *J. Phys.: Conf. Ser.* **1530** 011001. <https://doi.org/10.1088/1742-6596/1530/1/011001>]; **Link of published book:**

[\[https://iopscience.iop.org/article/10.1088/1742-6596/1530/1/011001\]](https://iopscience.iop.org/article/10.1088/1742-6596/1530/1/011001)

2. I have successfully edited book as a Guest-Editor covering 159 papers (Both original articles, review and mini articles) based upon Materials science and Engg., Energy resources, Computational optimization and Modelling techniques, Applied Sciences etc themes from the, “Iraqi Academics Syndicate International Conference for Pure and Applied Sciences (IICPS)” for the publication in the IOP Science: Journal of Physics. **Book DOI details:** [2021 *J. Phys.: Conf. Ser.* **1818** 011001 DOI:[10.1088/1742-6596/1818/1/011001](https://doi.org/10.1088/1742-6596/1818/1/011001)]; **Link of published book:** [https://iopscience.iop.org/issue/1742-6596/1818/1?fbclid=IwAR1YYBNAvtberVREqCt35k_0E7ipKQm60Sqkk1JUyr2pTql0U6vCKZS15bo]

3. I have successfully edited book as a Guest-Editor covering 50 papers (Both original articles, review and mini articles) based upon Computational optimization and Modelling techniques etc themes from the, “CFP Modern Application on Information and Communication Technology” for the publication in the Open Computer Science Journal: De-Gruyter Publisher. **Book details:** [<https://www.degruyter.com/view/journals/comp/comp-overview.xml>].

4. I have successfully edited book as a Guest-Editor covering 159 papers (Both original articles, review and mini articles) based upon Materials science and Engg., Energy resources, Computational optimization and Modelling techniques, Applied Sciences etc themes from the, “3rd International Scientific Conference of Engineering Sciences and Advances Technologies (IICESAT), College of Material Engineering, University of Babylon, Iraq in 4-5 June, 2021” for the publication in the IOP Science: Journal of Physics. **Book DOI details:** [2021 *J. Phys.: Conf. Ser.* **1973** (2021) 011001 DOI:[10.1088/1742-6596/1973/1/011001](https://doi.org/10.1088/1742-6596/1973/1/011001)]; **Link of published book:**

[\[https://iopscience.iop.org/issue/1742-6596/1973/1\]](https://iopscience.iop.org/issue/1742-6596/1973/1)

[https://iopscience.iop.org/issue/1742-

6596/1973/1?fbclid=IwAR2hVx0Ww- 2_utOfVA1qfxWRJZlqRhjqY8qFkPH2H-iX8Ytjxe3RXqsY_9o]

5. I am a Lead Guest-Editor for the theme entitled, “**Advanced Hybrid Composite Materials for Engineering and Biomedical Applications**”, for the publication in the **POLYMERS (MDPI, JCR Q1, SCI-E indexed Journal with 16/90 Ranking in Materials Science)**. **Link of published special issue:**

[https://www.mdpi.com/journal/polymers/special_issues/adv_compos_mater_eng_biomed_appl].

6. I am a Lead Guest-Editor for the theme entitled, “**Machining Challenges towards Pico-Precision**”, for the publication in the **MACHINES (MDPI, JCR Q2, SCI-E indexed Journal)**. **Link of published special issue:**

[https://www.mdpi.com/journal/machines/special_issues/730527409W].

7. I have successfully edited book as a Guest-Editor covering 110 papers (Both original articles, review and mini articles) based upon Engineering Sciences, Materials science and Engg., Energy resources, Computational optimization and Modelling techniques etc themes from the, “2nd International Conference of Al-Esraa University College for Engineering Sciences (ICAUC_ES)” for the publication in the IOP Science Conference series: Earth and Environmental Science. **Book DOI details:** [2022 IOP Conf. Ser.: Earth Environ. Sci. 961 011001. <https://doi.org/10.1088/1755-1315/961/1/011001>]; **Link of published book:** [https://iopscience.iop.org/article/10.1088/1755-1315/961/1/011001/pdf]

8. I am a Guest-Editor for the theme entitled, “**Revolution and challenge in machining/forming processing aiming at carbon reduction**”, for the publication in the *Frontiers of Mechanical Engineering (SPRINGER Journal)*, Q1, SCI-E indexed Journal). **Link of published special issue:**
[https://www.springer.com/journal/11465/updates/20078422?error=cookies_not_supported&code=8af596f5-02cb-4199-9a70-e948c389a2af].
9. I have successfully edited book as a Guest-Editor covering 110 papers (Both original articles, review and mini articles) based upon Engineering Sciences, Materials science, Energy resources, **Special issue on Research Studies and Applications in Engineering and Applied Sciences (RSAEAS), 10 April 2022** for the publication in the *Journal of Engineering Science and Technology (JESTEC)*. **Link of published book:**
[https://jestec.taylors.edu.my/Special%20Issue%20RSAEAS_%20Apr_2022.htm]
10. I am a Guest-Editor for the theme entitled, “**Enhanced Heat Transfer Technology Based on Emission Reduction and Carbon Reduction in Cutting/Grinding**”, for the publication in the *Chinese Journal of Mechanical Engineering (CJME)* (SPRINGER, IF=1.936 (Q3 in Engineering-Mechanical). Cite Score=4.6, category rank: 134/596 (Q1), SCI-E indexed Journal).
Link of published special issue:
[<http://www.cjmenet.com/news/Word%20Template.htm>,
<https://www.editorialmanager.com/chme/default.aspx>, “EHTT2022” in front of the article title].
11. I am a Guest-Editor for the theme entitled, “**Applications of Nanotechnology in Building Integrated Solar Thermal Energy Systems (BiSTES) for Energy-efficient Buildings**”, for the publication in the *Frontiers in Built Environment* (FRONTIERS, (Q2 ranking). ESCI and Scopus indexed Journal).
Link of published special issue:

[<https://www.frontiersin.org/research-topics/55690/applications-of-nanotechnology-in-building-integrated-solar-thermal-energy-systems-bistes-for-energy-efficient-buildings>].

ON-HAND WORKSHOPS/SKILLS DEVELOPMENT COURSES/FACULTY DEVELOPMENT PROGRAMMES/PARTICIPATION IN SHORT TERM COURSES:

S.No.	Course's name	Sponsored and Conducted by the Institutes/Universities	Dates
1.	Additive Manufacturing with Interdisciplinary Applications (AMIA-20)	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	29 June - 03 July, 2020
2.	Hybrid Manufacturing Processes: Opportunities and Challenges (HMPOC-20)	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	06 July – 10 July, 2020
3.	Supply Chain Management, Challenges and Strategies (SCMCS-20)	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	13 July – 17 July, 2020
4.	Industry 4.0 and Smart Manufacturing: Opportunities and Challenges" (ISMOC-20)	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	20 July – 24 July, 2020
5.	International virtual seminar on the Recent Advanced Materials in Energy Applications	Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology.	30 July-31July, 2020
6.	Reliability, Maintainability and Quality Issues in Process Industries	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	04- 08 August, 2020
7.	Material Characterization Techniques	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	24 to 28 August, 2020
8.	Advanced Energy Materials	TEQIP-III by Dr. B.R. Ambedkar NIT Jalandhar	12 th -16 th October
9.	Multidisciplinary research innovation in engineering, science and technology for sustainable development	B.T. Kumaon Institute of Technology, Dwarahat	26 th October-07 th November 2020
10.	Writing Quality Technical Paper: Publisher's Perspective	I.K. Gujral Punjab Technical University in Collaboration with IEEE	May 20, 2021

11.	Aerospace Engineering Applications & Beyond	GNA University in collaboration with Human Resource Development Centre	29th & 30th May 2021
12.	Hands-on Workshop on Sophisticated Research Equipment (HWSRE-2021)	University Center for Research and Development, Chandigarh University and sponsored by Science and Engineering Research Board (SERB) under Accelerate Vigyaan “Karyashala” program.	7th to 13th June, 2021
13.	Advanced Materials & Manufacturing for Industry 4.0 (AMMI-2021)	Human Resource Development Centre, Faculty of Engineering, Design and Automation, GNA University, Phagwara, Punjab.	26th to 27th June 2021

“A good leader always gives freedom to work and protects his fellow members by contributing his experience and skills towards the progressive growth and development of organization……!”

Dr. Shubham Sharma

H.NO-191/9A, Preet Nagar,

Ladowali Road, Jalandhar, Punjab,

144001, India.

+91-7009239473; +91-9478395371

shubham543sharma@gmail.com; shubhamsharmacsircr@gmail.com

Dear Prof. Dr. sir/mam,

I am writing to express my sincere interest in the opening of a post-doctoral fellow or Research Scientist or Research & Development Engineer or Assistant Professor job. I would love to pursue my postdoctoral studies in Advanced Materials Science as a member of your team under your learnt guidance and dynamic Research leadership skills. I am a recent graduate of CSIR-Central Leather Research Institute, in collaboration with the IK Gujral Punjab Technical University, Main Campus- Kapurthala, Punjab, India, where I gave my presentation on the utilization of Industrial Leather Solid wastes/Recycled/Low-cost Polymer Composites for Multi- functional applications. I have focused on developing flexible polymer composites for value-addition applications in my research. In my doctoral studies, I have utilized industrial Leather wastes in combination with recycled polymer materials for the fabrication of composites for value-added applications, thus reducing environmental issues and providing a sustainable solution. The leather waste- reinforced recycled polymer composites were fabricated using a two-roll mill followed by a hot-press molding process. Most of my work has revolved around carry-out various physicochemical, thermal, morphological, structural, elemental mapping, microstructural, topographic image-mapping, damping, cushioning, corrosion, electrical, and mechanical properties as mentioned below, to understand the scope of the fabricated composites for suitable applications. In my work, the Mechanical properties (Tensile, Compressive, Tear Strength, Hardness, Impact Strength, Flexural Strength, Adhesion Strength, Abrasion Resistance, and Cushioning and Fatigue-life cycle analysis) were evaluated by Universal Testing Machine (UTM), rotating drum abrasion machine, and Ross-Flexer fatigue testing machine. Thermal properties of the samples were performed using thermogravimetric analysis (TGA) and Differential Scanning Calorimetry (DSC) analysis. Morphology of the samples was examined by Scanning electron microscopy (SEM), Atomic Force Microscopy (AFM), XRD, and Energy Dispersive Analysis of X-ray (EDAX). The vibrational damping performance of the composites was determined

using the Compression and Resilience test (CRT) and confirmed with cushioning properties. The wear rate, corrosion, fatigue-life cycle, and electrical properties were also studied. The influence of the weight percentage of the Leather fibers and the effect of plasticizers on the physicochemical, mechanical, thermal, volumetric weight-loss, and electrical properties of the fabricated composites were also studied. Additionally, the multi-objective optimization and modeling were carried out to optimize the hot-press molding process parameters through Central-composite- designs (CCD) approach in Response Surface Methodology (RSM). Comparison of the results with existing literature, cost estimation, and economic analysis has also been carried out to recommend the scope of the fabricated composites for suitable applications such as in leather ancillaries, footwear, packaging, automotive, construction, and transportation and machine industries. I am looking forward to continuing my research and working towards developing emerging and ingenious coating materials for multifunctional diverse applications in Engineering (Using Conducting polymers and other polymers for electrochemical, sensors, actuators, flexible electronics, anti-static (electrically conducting), anti- corrosion, actuators, sensors, shape memory alloys, biomedical, flexible electronics, solar cells, fuel cells, supercapacitors, LEDs, and adhesive applications with desired- appealing and cost- effective, functional surface coatings); and Biomedical fields(Using Biodegradable/Bioactive polymers for antimicrobial, antitumor, anti-inflammatory, and anticancer activities in the tissue engineering, regenerative medicine, bioengineering, targeted drug discovery and delivery, implantation, and wound repair and healing) to flaunt my skills and experience as a member of your research team. In the light of the aforementioned domain, I would respectfully acknowledge to you that I would like to put emphasis on the advanced materials science, processing, and characterizations or studies for prospective applications. I would appreciate the opportunity to continue my research in your laboratory and pursue a long-term future. I believe the nature of my research relates to your lab because, as the leading institution in the above-mentioned research fields, my chosen area of study is extremely relevant to your efforts. I think my knowledge and experience surrounding the aforementioned areas or core domains could aid in your research. I am a self-motivated, independent researcher with seven years of experience. As a detail- oriented, qualified, and creative candidate, I feel my research, Drafting, and perpetrating research activities within the stipulated time, Scientific publication writings, Experience in drafting and filing Patents/Copyrights, grant proposal writing, Research problem formulation skills, practical field knowledge, instrumentation handling, and tutoring experience could be a major asset to your laboratory. I've attached my CV which broadly covers my scientific accomplishments, a List of Publications (Around ~100 Science Citation Index/Science Citation Index Expanded/Scopus with Q1/Q2 indexed Journals, more

than 100 International Conference articles, books, and book chapters), 06 Granted International Patents and 2 filled Patents, published 8 special issues as one of the Guest Editors in SCI/SCI-E/ESCI/Web of Science indexed International Journals and would be very interested in setting up a time to further discuss my skills and qualifications with you. I am highly motivated and eager to learn as much as possible, and I always try to go the extra mile. As you can read in my CV, my skills and experience make me an ideal candidate for this position and I truly believe I could add great value to your team. Please let me know if you need some more information about my research and career interests. I look forward to hearing from you.

Sincerely,

Dr. Shubham Sharma

Statement Regarding Canadian Citizenship/Permanent Resident Status

IMMIGRATION APPLICATION NUMBER:

Applied for Canada immigration on Permanent Residency (PR) (File serial number (FSN): 503968). The file is in the final stage of pool system.

THE INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM (GENERAL IELTS):

- **Candidate Number:** 298260 (General Training)
- **Listening:** 6.5, **Reading:** 6.5, **Writing:** 6.5, **Speaking:** 6.5; **Overall Band Score:** 6.5
- **Common European Framework of Reference (CEFR Level):** B2 Level, Upper-Intermediate independent user
- **Test report form number:** 20IN298260SHAS855G
- **IELTS score Valid up to:** April 2023
- **Passport No.:** Z4612446