



# Jain College of Engineering & Research,

Udyambag, Belagavi.

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NBA Accredited Programmes- ECE & ME

## List of Publications

Academic Year (2025-26)

| Sl no | Name of the staff | Publication / Book Chapter / Patent | Title of the Paper Published                                                                                                                 | Journal /Book                                                                       | DOI                                                                                                       | Citations |
|-------|-------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------|
| 1     | Dr. Gangadhar M K | Publication                         | Jute Fiber and Its Composites: Processing, Properties, and Applications                                                                      | Journal of Natural Fibers                                                           | <a href="https://doi.org/10.1080/15440478.2026.2635010">https://doi.org/10.1080/15440478.2026.2635010</a> | 0         |
|       |                   | Publication                         | A study of viscoelastic and thermal properties of Habeshian banana fiber-reinforced epoxy composites: theoretical and experimental appraisal | Springer Nature                                                                     | <a href="https://doi.org/10.1007/s00289-025-06238-9">https://doi.org/10.1007/s00289-025-06238-9</a>       | 1         |
|       |                   | Publication                         | Structural and thermal integrity of kevlar fabric – Crumb rubber sandwich polymer composite                                                  | Journal of Composite Materials                                                      | <a href="https://doi.org/10.1177/00219983251352700">https://doi.org/10.1177/00219983251352700</a>         | 1         |
|       |                   | Book Chapter                        | Advantages of Nanomaterial-Modified Electrochemical Sensors over Conventional Electrochemical Sensors                                        | Fabrication and Advanced Applications of Nanomaterial-Based Electrochemical Sensors | <a href="https://doi.org/10.1201/9781003512639">https://doi.org/10.1201/9781003512639</a>                 | 0         |



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Academic Year (2024-25)

| Sl no | Name of the staff       | Publication / Book Chapter / Patent | Title of the Paper Published                                                                                                                       | Journal /Book                                                                                               | DOI                                                                                                                                               | Citations |
|-------|-------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1     | Prof.Karthik N Ramadurg | <b>Book Chapter</b>                 | Analytical insights and predictive modeling of erosion in abrasive water-jet machining (AWJM)                                                      | BOOK-DE GRUTER “ ABRASIVE WATER JET MACHINING OF COMPOSITES “                                               | <a href="https://degruyter.com/document/doi/10.1515/9783111240244-007/html">https://degruyter.com/document/doi/10.1515/9783111240244-007/html</a> | 0         |
| 2     | Prof.Karthik N Ramadurg | <b>Book Chapter</b>                 | Enhancing precision in abrasive water-jet machining using AI and ML techniques                                                                     | BOOK-DE GRUTER “ ABRASIVE WATER JET MACHINING OF COMPOSITES “                                               | <a href="https://degruyter.com/document/doi/10.1515/9783111240244-007/html">https://degruyter.com/document/doi/10.1515/9783111240244-007/html</a> | 0         |
| 3     | Dr. Gangadhar M K       | Publication                         | Flexural behavior of epoxy composites reinforced with banana fibers in different architectures: experimental, analytical, and numerical approaches | Biomass Conversion and Biorefinery                                                                          | <a href="https://doi.org/10.1007/s13399-024-05872-z">https://doi.org/10.1007/s13399-024-05872-z</a>                                               | 0         |
|       |                         | Book Chapter                        | Coating Methods and Materials for 3D Printed (FDM) Par                                                                                             | Post-Processing of Parts and Components Fabricated by Fused Deposition Modeling Techniques and Advancements | <a href="https://doi.org/10.1201/9781032665351">https://doi.org/10.1201/9781032665351</a>                                                         | 0         |
|       |                         |                                     | An Overview of Mechanical Alloying and Conventional Metallurgical Methods                                                                          | Mechanically Alloyed Novel Materials                                                                        | <a href="https://doi.org/10.1007/978-981-97-6504-1_4">https://doi.org/10.1007/978-981-97-6504-1_4</a>                                             | 0         |



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|---|-------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---|
|   |                   | Publication  | An Experimental Study on the Hardness, Inter Laminar Shear Strength, and Water Absorption Behavior of Habeshian Banana Fiber Reinforced Composites | Journal of Natural Fibers                                                   | <a href="https://doi.org/10.1080/15440478.2024.2338930">https://doi.org/10.1080/15440478.2024.2338930</a>       | 6 |
| 4 | Prof. Rayappa S M | Book Chapter | Role of Powder Metallurgy Industries in Various Sectors                                                                                            | Powder Metallurgy and Additive Manufacturing: Fundamentals and Advancements | <a href="https://doi.org/10.31399/asm.tb.pmamfa.t59400315">https://doi.org/10.31399/asm.tb.pmamfa.t59400315</a> | 0 |

## Academic Year (2023-24)

| SI no | Name of the staff           | Publication / Book Chapter / Patent | Title of the Paper Published                                                                                       | Journal / Book                                                              | DOI                                                                                                       | Citations |
|-------|-----------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------|
| 1     | Dr. Gangadhar M Kanaginahal | Book Chapter                        | Mechanical Alloying of Magnesium and Titanium Alloys                                                               | Advancements in Powder Metallurgy: Processing, Applications, and Properties | 10.4018/978-1-6684-9385-4.ch005                                                                           | 0         |
|       |                             |                                     | Mechanical Alloying of Aluminium Alloys                                                                            |                                                                             | 10.4018/978-1-6684-9385-4.ch004                                                                           | 0         |
|       |                             | Publication                         | Tensile, compressive, and fracture behavior of Habeshian chopped banana/epoxy core sandwich woven banana composite | Biomass Conversion and Biorefinery                                          | <a href="https://doi.org/10.1007/s13399-024-05455-y">https://doi.org/10.1007/s13399-024-05455-y</a>       | 7         |
|       |                             | Publication                         | Influence of Habesha eggshell on the dry sliding wear behavior of epoxy composites                                 |                                                                             | <a href="https://doi.org/10.1007/s13399-024-05482-9">https://doi.org/10.1007/s13399-024-05482-9</a>       | 2         |
|       |                             | Publication                         | An experimental study on the hardness, inter laminar shear strength and water                                      | Journal of Natural Fibers                                                   | <a href="https://doi.org/10.1080/15440478.2024.2338930">https://doi.org/10.1080/15440478.2024.2338930</a> | 5         |



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|---|------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---|
|   |                        |              | absorption behavior of Habeshian banana fiber reinforced composites                                                                                     |                                                                             |                                                                                                     |   |
|   |                        | Publication  | Flexural behavior of epoxy composites reinforced with banana fibers in different architectures: experimental, analytical, and numerical approaches      | Biomass Conversion and Biorefinery                                          | <a href="https://doi.org/10.1007/s13399-024-05872-z">https://doi.org/10.1007/s13399-024-05872-z</a> | 0 |
|   |                        | Publication  | From Powders to Alloys: A Study of the Mechanical Alloying Process and Sintering                                                                        | Journal of Mines, Metals and Fuels                                          | 10.18311/jmmf/2023/45622                                                                            | 0 |
|   |                        | Publication  | Influence of Fiber Type on Electrical, Thermal and Mechanical Properties of Glass Fiber reinforced Polymer Composites for Insulation Panel Applications | Journal of The Institution of Engineers (India): Series D                   | <a href="https://doi.org/10.1007/s40033-024-00808-3">https://doi.org/10.1007/s40033-024-00808-3</a> | 0 |
|   |                        | Patent       | Solar-Powered Bird And Animal Repeller For Agriculture                                                                                                  | INDIAN Patent                                                               | Application No: 202341072022 A                                                                      | 0 |
|   |                        | Publication  | Analytical modeling and experimental estimation of the dynamic mechanical characteristics of green composite: Caesalpinia Decapetala seed reinforcement | Polymer Engineering and Science                                             | <a href="https://doi.org/10.1002/pen.26599">https://doi.org/10.1002/pen.26599</a>                   | 0 |
| 2 | Prof. Rayappa S Mahale | Book Chapter | Mechanical Alloying of Magnesium and Titanium Alloys                                                                                                    | Advancements in Powder Metallurgy: Processing, Applications, and Properties | 10.4018/978-1-6684-9385-4.ch005                                                                     | 0 |
|   |                        |              | Mechanical Alloying of Aluminium Alloys                                                                                                                 |                                                                             | 10.4018/978-1-6684-9385-4.ch004                                                                     | 0 |
|   |                        | Publication  | From Powders to Alloys: A Study of the Mechanical Alloying Process and                                                                                  | Journal of Mines, Metals and Fuels                                          | 10.18311/jmmf/2023/45622                                                                            | 0 |



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|--|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--|---|
|  |             |                                                                                                                                                                                                      | Sintering                                                 |                                                                                                                     |  |   |
|  | Patent      | Solar-Powered Bird And Animal Repeller For Agriculture                                                                                                                                               | INDIAN Patent                                             | Application No: 202341072022 A                                                                                      |  | 0 |
|  | Publication | Fabrication of mechanically alloyed high entropy alloys (20-Fe-20Cr-20Ni-20Mn-20Ti) modified carbon paste electrode sensor for the cyclic voltammetric determination of methyl orange                | Inorganic Chemistry Communications                        | <a href="https://doi.org/10.1016/j.inoche.2024.112428">https://doi.org/10.1016/j.inoche.2024.112428</a>             |  | 8 |
|  | Publication | Fabrication of Mechanically Alloyed Super Duplex Stainless Steel Powder-Modified Carbon Paste Electrode for the Determination of Methylene Blue by the Cyclic Voltammetry Technique                  | ACS omega                                                 | <a href="https://doi.org/10.1021/acsomega.3c09163">https://doi.org/10.1021/acsomega.3c09163</a>                     |  | 8 |
|  | Publication | The Behavior of Banyan (B)/Banana (Ba) Fibers Reinforced Hybrid Composites Influenced by Chemical Treatment on Tensile, Bending and Water Absorption Behavior: An Experimental and FEA Investigation | Journal of Composites Science                             | <a href="https://doi.org/10.3390/jcs8010031">https://doi.org/10.3390/jcs8010031</a>                                 |  | 3 |
|  | Publication | Effect of Ball to Powder Ratios on the Phase Transformation of Austenite and Ferrite During Ball Milling of SAF-2507 Super Duplex Stainless Steel Powders                                            | Journal of The Institution of Engineers (India): Series D | <a href="https://doi.org/10.1007/s40033-023-00624-1">https://doi.org/10.1007/s40033-023-00624-1</a>                 |  | 3 |
|  | Book        | Mechanical alloying: a                                                                                                                                                                               | Mechanical Alloying                                       | <a href="https://doi.org/10.1016/B978-0-443-16151-3.00007-5">https://doi.org/10.1016/B978-0-443-16151-3.00007-5</a> |  | 0 |



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|---|---------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---|
|   |                           | Chapter      | catalyst for advancing tungsten heavy alloy fabrication                                                                                 | of Ferrous and Non-Ferrous Alloys Processing, Properties, and Applications                 |                                                                                                       |   |
|   |                           | Publication  | Investigation of wear behavior for three-body made of CA-40 steel and nickel hard cast iron by abrasion method                          | THIRD INTERNATIONAL CONFERENCE ON ADVANCES IN PHYSICAL SCIENCES AND MATERIALS: ICAPSM 2022 | <a href="https://doi.org/10.1063/5.0178634">https://doi.org/10.1063/5.0178634</a>                     | 2 |
|   |                           | Book Chapter | A Review on Cyclic Voltammetric Investigation of Toxic Heavy Metals                                                                     | Frontiers in Voltammetry                                                                   | 10.5772/intechopen.108411                                                                             | 8 |
| 3 | Prof. Prasanna Mangaonkar | Publication  | Design and analysis of horizontal crystallizer for agro-chemical industries                                                             | Materials Today: Proceedings                                                               | <a href="https://doi.org/10.1016/j.matpr.2023.06.269">https://doi.org/10.1016/j.matpr.2023.06.269</a> | 0 |
| 4 | Dr. S V Gorabal           | Conference   | Structural, surface morphological and mechanical behavior of fuel cell membranes infused with graphene oxide and graphene nanoplatelets | AIP Conference Proceedings                                                                 | <a href="https://doi.org/10.1063/5.0217514">https://doi.org/10.1063/5.0217514</a>                     | 0 |
|   |                           | Publication  | A Comprehensive Survey of Cybercrime and Cybersecurity                                                                                  | IEEE International Conference                                                              | 979-8-3503-0544-9/23/                                                                                 | 0 |

## Academic Year (2022-23)

| SI no | Name of the staff | Publication / Book Chapter / Patent | Title of the Paper Published            | Journal / Book                     | DOI                                                                                                 | Citations |
|-------|-------------------|-------------------------------------|-----------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------|-----------|
| 1     | Dr. Gangadhar     | Publication                         | Theoretical and experimental assessment | Biomass Conversion and Biorefinery | <a href="https://doi.org/10.1007/s13399-023-04704-w">https://doi.org/10.1007/s13399-023-04704-w</a> | 8         |



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|---|----------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----|
| 2 | M<br>Kanaginaha<br>I |              | of thermal stability of novel bio-waste Habesha eggshell particles reinforced epoxy composite                                                                  |                                                                                      |                                                                                                           |    |
|   |                      | Publication  | Flammability studies of Natural Fiber Reinforced Polymer Composites fabricated by Additive Manufacturing Technology –A Review                                  | Journal of The Institution of Engineers (India): Series D                            | <a href="https://doi.org/10.1007/s40033-023-00509-3">https://doi.org/10.1007/s40033-023-00509-3</a>       | 3  |
|   |                      | Publication  | Studies on Dielectric, Super-Capacitive and Photoluminescence Properties of Metal Organic Frameworks Subjected to Varying Temperature and Frequencies          | Nano Hybrids and Composites                                                          | <a href="https://doi.org/10.4028/p-si6964">https://doi.org/10.4028/p-si6964</a>                           | 11 |
|   |                      | Book Chapter | Applications of Fused Deposition Modeling in Dentistry                                                                                                         | Development, Properties and Industrial Applications of 3D Printed Polymer Composites | 10.4018/978-1-6684-6009-2.ch012                                                                           | 10 |
|   |                      | Publication  | Evaluation of dynamic mechanical analysis of crump rubber epoxy composites: experimental and empirical perspective                                             | Journal of Brazillian Science of Mechanical Science and Engineering                  | <a href="https://doi.org/10.1007/s40430-023-04033-z">https://doi.org/10.1007/s40430-023-04033-z</a>       | 9  |
|   |                      | Publication  | Leverage of weave pattern and composite thickness on dynamic mechanical analysis, water absorption and flammability response of bamboo fabric/epoxy composites | HELIYON                                                                              | <a href="https://doi.org/10.1016/j.heliyon.2023.e12950">https://doi.org/10.1016/j.heliyon.2023.e12950</a> | 23 |
| 2 | Prof.<br>Rayappa S   | Publication  | Flammability studies of Natural Fiber Reinforced                                                                                                               | Journal of The Institution of                                                        | <a href="https://doi.org/10.1007/s40033-023-00509-3">https://doi.org/10.1007/s40033-023-00509-3</a>       | 3  |



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|--------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----|
| Mahale |              | Polymer Composites fabricated by Additive Manufacturing Technology –A Review                                                                          | Engineers (India): Series D                                                                      |                                                                                                                     |    |
|        | Publication  | Studies on Dielectric, Super-Capacitive and Photoluminescence Properties of Metal Organic Frameworks Subjected to Varying Temperature and Frequencies | Nano Hybrids and Composites                                                                      | <a href="https://doi.org/10.4028/p-si6964">https://doi.org/10.4028/p-si6964</a>                                     | 11 |
|        | Publication  | Electrochemical Determination of Ascorbic Acid by Mechanically Alloyed Super Duplex Stainless Steel Powders                                           | Metals                                                                                           | <a href="https://doi.org/10.3390/met13081430">https://doi.org/10.3390/met13081430</a>                               | 32 |
|        | Publication  | Dielectric and Mechanical Properties of Silicone Rubber Composites Reinforced by Conductive Carbon Black and Neopentyl Glycol Diglycidyl Ether        | Silicon                                                                                          | <a href="https://doi.org/10.1007/s12633-022-02210-8">https://doi.org/10.1007/s12633-022-02210-8</a>                 | 4  |
|        | Book Chapter | Biological and biomedical applications of fluoropolymer nanocomposites                                                                                | Advanced Fluoropolymer Nanocomposites Fabrication, Processing, Characterization and Applications | <a href="https://doi.org/10.1016/B978-0-323-95335-1.00001-3">https://doi.org/10.1016/B978-0-323-95335-1.00001-3</a> | 0  |
|        | Publication  | Electrochemical Sensor Applications of Nanoparticle Modified Carbon Paste Electrodes to Detect Various Neurotransmitters: A Review                    | Applied Mechanics and Materials                                                                  | <a href="https://doi.org/10.4028/p-mizm85">https://doi.org/10.4028/p-mizm85</a>                                     | 32 |



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|---|----------------|-------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------|---|
| 3 | Dr S V Gorabal | Publication | COMPARATIVE STUDY OF DIFFERENTIAL SCANNING CALORIMETRY (DSC) ANALYSIS OF HDPE AND HDPE-WALNUT SHELL COMPOSITES. | Journal of Emerging Technologies and Innovative Research | JETIR2212459<br>(ISSN-2349-5162) | 1 |
|---|----------------|-------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------|---|

## Academic Year (2021-22)

| SI no | Name of the staff | Publication / Book Chapter / Patent | Title of the Paper Published                                                                                                                   | Journal / Book                                                                                   | DOI                                                                                                                 | Citations |
|-------|-------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------|
| 1     | Rayappa S Mahale  | Publication                         | Electrochemical Determination of Ascorbic Acid by Mechanically Alloyed Super Duplex Stainless Steel Powders                                    | Metals                                                                                           | <a href="https://doi.org/10.3390/met13081430">https://doi.org/10.3390/met13081430</a>                               | 12        |
|       |                   | Publication                         | Dielectric and Mechanical Properties of Silicone Rubber Composites Reinforced by Conductive Carbon Black and Neopentyl Glycol Diglycidyl Ether | Silicon                                                                                          | <a href="https://doi.org/10.1007/s12633-022-02210-8">https://doi.org/10.1007/s12633-022-02210-8</a>                 | 4         |
|       |                   | Book Chapter                        | Biological and biomedical applications of fluoropolymer nanocomposites                                                                         | Advanced Fluoropolymer Nanocomposites Fabrication, Processing, Characterization and Applications | <a href="https://doi.org/10.1016/B978-0-323-95335-1.00001-3">https://doi.org/10.1016/B978-0-323-95335-1.00001-3</a> | 0         |
|       |                   | Publication                         | Electrochemical Sensor Applications of Nanoparticle Modified Carbon Paste Electrodes to                                                        | Applied Mechanics and Materials                                                                  | <a href="https://doi.org/10.4028/p-mizm85">https://doi.org/10.4028/p-mizm85</a>                                     | 32        |



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|---|----------------|-------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------|---|
|   |                |             | Detect Various Neurotransmitters: A Review                                                                                       |                                                           |                                 |   |
| 2 | Dr S V Gorabal | Publication | A study on glass fiber reinforced composite filled with polypropylene and nanoparticles : Anti-riot jackets                      | International Journal of Mechanical Engineering           | ISSN : 0974-5823                | 0 |
|   |                | Conference  | Comprehensive studies on polyvinyl alcohol (PVA) doped with MWCNTs and CNFs Nano composite membranes for fuel cells applications | IOP Conference Series : Materials Science and Engineering | 10.1088/1757-899X/1070/1/012090 | 0 |