

Journal publications

1. Deepti Ranjan Sahu, **Amitava Mandal**, Rakesh Kumar (2024), Numerical and experimental investigation into the energy distribution in powder mixed EDM, CIRP Journal of Manufacturing Science and Technology 52 (2024) 229–245, <https://doi.org/10.1016/j.cirpj.2024.05.008>
2. Kashif Hasan Kazmi, Sumit K. Sharma, **Amitava Mandal**, Alok Kumar Das (2024), Investigating the effect of path planning strategies on 3D metallic structure deposited using robotic WAAM, Materials Chemistry and Physics, 327, 129909, ISSN 0254-0584, <https://doi.org/10.1016/j.matchemphys.2024.129909>
3. Vishal Kumar and **Amitava Mandal** (2024), A critical investigation of the anisotropic behavior in the WAAM-fabricated structure, Rapid Prototyping Journal 30/5 (2024) 1023–1045, <http://dx.doi.org/10.1108/RPJ-01-2023-0005>
4. Vishal Kumar, Mukul Anand, **Amitava Mandal**, (2024) Critical Analysis of Inter-layer Dwell Time on the Properties of Wire Arc Additive Manufactured Steel Structure: Experimental and Modelling Approach, Arabian Journal for Science and Engineering, 49, 15749–15772, <https://doi.org/10.1007/s13369-024-09120-4>
5. Kashif Hasan Kazmi, Mukesh Chandra, Sonu Rajak, Sumit K. Sharma, **Amitava Mandal** & Alok Kumar Das (2024), Implementing machine learning in robotic wire arc additive manufacturing for minimizing surface roughness, International Journal of Computer Integrated Manufacturing, DOI: 10.1080/0951192X.2024.2330091
6. Ankit Singh, Vishal Kumar and **Amitava Mandal** (2024), An experimental and numerical study on the influence of interlayer time interval in wire-arc additive manufacturing process, Proc IMechE Part C: J Mechanical Engineering Science, 2024, DOI: 10.1177/09544062241233490
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8. Biplab Kumar Roy, Deepak Kumar Mandal, **Amitava Mandal**, (2024) Investigation of droplet impact dynamics on textured cylindrical hydrophobic surfaces, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 680, X132674, <https://doi.org/10.1016/j.colsurfa.2023.132674>.
9. Monty Kumar, Anubhav Kumar Sharma, Kailash Jha and **Amitava Mandal**, (2023), Die-sink EDM texturing to fabricate hydrophilic and wear resistant surface, SURFACE ENGINEERING, 2023, VOL. 39, NO. 5, 591–599, <https://doi.org/10.1080/02670844.2023.2245604>
10. Shakti Kumar, **Amitava Mandal**, Alok Kumar Das, and Prosenjit Das, (2023) Development of a Cu/MoS₂/Ni Self-Lubricating Composite Clad through Laser Additive Approach over a Ti6Al4V Substrate and Its Characterizations, Langmuir 2023 39 (48), 17201-17215, DOI: 10.1021/acs.langmuir.3c02137
11. Monty Kumar, Mukul Anand, Kailash Jha, **Amitava Mandal**, (2023) Parametric optimization and clad characterization of composite coating prepared on Ti-6Al-4V alloy using TiB₂-Ni-Yb₂O₃ precursor powders, Materials Chemistry and Physics, Volume 308, 128248, ISSN 0254-0584, <https://doi.org/10.1016/j.matchemphys.2023.128248>.
12. Biplab Kumar Roy, Saransh Tiwari, **Amitava Mandal**, (2023) An Analysis on the Machinability Aspects of the Turning Process Using WEDM for Profile Generation, Arabian Journal for Science and Engineering, <https://doi.org/10.1007/s13369-023-08133-9>

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14. Manchu Mohan Krishna Sai , Shakti Kumar, **Amitava Mandal** , Mukul Anand, (2023) Sinterability of SS316, SiC, and TiN multi-material additive manufacturing via selective laser sintering, Optics & Laser Technology 167 109686, <https://doi.org/10.1016/j.optlastec.2023.109686>
15. Kashif Hasan Kazmi, Alok Kumar Das, Sumit K. Sharma, Amitava Mandal, Amarish Kumar Shukla, (2023) Wire arc additive manufacturing of ER-4043 aluminum alloy: evaluation of bead profile, microstructure, and wear behavior, evaluation of bead profile, microstructure, and wear behavior. Weld World, Vol. 67, 2187–2200. <https://doi.org/10.1007/s40194-023-01558-8>
16. Kashif Hasan Kazmi, Sumit K. Sharma, Alok Kumar Das, **Amitava Mandal** & Amarish Shukla, Development of Wire Arc Additive Manufactured Cu-Si Alloy: Study of Microstructure and Wear Behavior, Journal of Materials Engineering and Performance (2023), <https://doi.org/10.1007/s11665-023-07972-9>
17. Tapas Chakraborty, Deepti Ranjan Sahu, **Amitava Mandal** & Bappa Acherjee (2023) Feasibility of Jatropha and Rice bran vegetable oils as sustainable EDM dielectrics, Materials and Manufacturing Processes, VOL. 38, NO. 1, 50–63, DOI: 10.1080/10426914.2022.2089891
18. Monty Kumar, Shakti Kumar, Kailash Jha & **Amitava Mandal** (2022) Composite coating by TIG cladding with different rare earth oxides, Surface Engineering, DOI: 10.1080/02670844.2022.2080901
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23. Rashmi Tyagi, Alok Kumar Das, **Amitava Mandal**, (2022) Wettability and Performance of Cu-MoS₂/SiC Coating Prepared by Electro-Discharge Coating Process, Transactions of the Indian Institute of Metals, Vol. 75, 1563–1572
24. Shakti Kumar, Monty Kumar, **Amitava Mandal** & Alok Das (2022) Ni-WS₂-Ti-6Al-4V self-lubricating coating on TC4 alloy by laser cladding, Surface Engineering, DOI: 10.1080/02670844.2022.2086961
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28. Biplab Kumar Roy, **Amitava Mandal**, An investigation into the effect of wire inclination in Wire-Electrical Discharge Turning process of NiTi-60 shape memory alloy, (2021) *Journal of Manufacturing Processes*, Vol. 64, 739–749
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Book Chapters

1. Shakti Kumar, **Amitava Mandal**, Laser Cladding of Titanium Alloy, *Laser Cladding of Metals*, Springer Nature Switzerland AG, 2021, <https://doi.org/10.1007/978-3-030-53195-9>, 215-242
2. Deepti Ranjan Sahu, Amit Kumar, Biplab Kumar Roy and **Amitava Mandal**, Parametric Investigation into Alumina Nanopowder Mixed EDM of Inconel 825 Alloy Using RSM, Springer Nature Singapore Pte Ltd. 2019, K. Shanker et al. (eds.), *Advances in Industrial and Production Engineering, Lecture Notes in Mechanical Engineering*, https://doi.org/10.1007/978-981-13-6412-9_16
3. Chakraborty T., **Mandal A.** (2022) Bio-Dielectric as an Alternative Degradable and Sustainable Fluid in EDM: A Review. In: Kolhe M.L., Jaju S.B., Diagavane P.M. (eds) *Smart Technologies for Energy, Environment and Sustainable Development*, Vol 1. Springer Proceedings in Energy. Springer, Singapore. https://doi.org/10.1007/978-981-16-6875-3_60