

Publications in International Journals:

1. Jha, G., Soren, S. and Mehta, K.D., 2025. A pilot-scale beneficiation study for removal of alumina and silica prior to metallurgical sintering. *Sādhanā*, 50(1), pp.1-13.
2. Jaiswal, R.K., Kumar, P., Soren, S., Nirala, A., Kumar, N., Khan, M.A., Khan, T.Y. and Almakayeel, N., 2024. Investigation on pyrolysis behavior and kinetic analysis of banana tree bark and coal blends in blast furnace injection. *Biomass Conversion and Biorefinery*, pp.1-16.
3. Sudhir, S., Soren, S. and Chowdhury, G.M., 2024. Investigating the Effect of the Iron Ore Pellet Addition on the Interaction Among Blast Furnace Burden in the Cohesive Zone. *Jom*, 76(7), pp.3311-3320.
4. Sudhir, S., Soren, S., Chowdhury, G.M., Jaiswal, R.K., Nirala, A., Khan, M.A., Alkahtani, M.Q., Islam, S. and Algburi, S., 2024. Utilization of rice husk substituting fossil fuel for pelletization process of goethite iron ore. *Environmental Technology & Innovation*, 34, p.103597.
5. Kumar, N., Soren, S., Prasad, R., Nirala, A., Sherif, E.S.M. and Razak, A., 2024. Wear characteristics of a CNTs reinforced aluminium composited fabricated by the solution mixing process. *Fullerenes, Nanotubes and Carbon Nanostructures*, 32(12), pp.1162-1174.
6. Jha, G., Soren, S. and Mehta, K.D., 2023. Assessment of the internal chemistry nexus of coke and biomass-based sinters. *Sādhanā*, 48(4), p.217.
7. Barik, K., Prusti, P., Soren, S., Meikap, B.C. and Biswal, S.K., 2023. Mineralogical investigation on preheating studies of high LOI iron ore pellet. *Powder Technology*, 418, p.118315.
8. Sahoo, S., Pare, A., Mishra, S., Soren, S. and Biswal, S.K., 2023. Prediction of sinter properties using a hyper-parameter-tuned artificial neural network. *ACS omega*, 8(13), pp.11782-11789.
9. Jaiswal, R.K., Soren, S. and Jha, G., 2023. A novel approach of utilizing the waste biomass in the magnetizing roasting for recovery of iron from goethitic iron ore. *Environmental Technology & Innovation*, 31, p.103184.
10. Nirala, A., Soren, S., Kumar, N., Khan, M.A., Islam, S. and Khan, N.A., 2023. Micro-mechanical and tribological behavior of Al/SiC/B₄C/CNT hybrid nanocomposite. *Scientific Reports*, 13(1), p.13147.
11. Kumar, N., Soren, S., Nirala, A., Almakayeel, N., Yunus Khan, T.M. and Khan, M.A., 2023. Distribution of carbon nanotubes in an aluminum matrix by a solution-mixing process. *ACS omega*, 8(37), pp.33845-33856.
12. Kumar, N., Soren, S., Prasad, R., Singh, Y., Nautiyal, H., Sharma, A., Tiang, S.S. and Lim, W.H., 2023. Optimization of sintering process parameters by taguchi method for developing Al-CNT-Reinforced powder composites. *Crystals*, 13(9), p.1352.
13. Barik, K., Prusti, P., Soren, S., Meikap, B.C. and Biswal, S.K., 2022. Analysis of iron ore pellets properties concerning raw material mineralogy for effective utilization of mining waste. *Powder Technology*, 400, p.117259.
14. Sahoo, S., Mishra, S., Sahu, S.N., Sahoo, M.K. and Soren, S., 2022. Reducing effect of biomass derived char on iron ore fines; a statistical investigation and regression modelling. *Metallurgical Research & Technology*, 119(4), p.417.

15. Prasad, R., Soren, S., Kumaraswamidhas, L.A., Pandey, C. and Pan, S.K., 2022. Experimental investigation of different fineness and firing temperatures on pellets properties of different iron ore fines from Indian mines. *Materials*, 15(12), p.4220.
16. Barik, K., Prusti, P., Soren, S., Meikap, B.C. and Biswal, S.K., 2022. Analysis of iron ore pellets properties concerning raw material mineralogy for effective utilization of mining waste. *Powder Technology*, 400, p.117259.
17. Nirala, A., Soren, S., Kumar, N., Shrivastava, Y., Kamal, R., Al-Mansour, A.I. and Alam, S., 2022. Assessing the mechanical properties of a new high strength aluminum hybrid MMC based on the ANN approach for automotive application. *Materials*, 15(6), p.2015.
18. Nirala, A., Soren, S., Kumar, N., Shrivastava, Y., Kamal, R., Al-Mansour, A.I. and Alam, S., 2022. *Assessing the Mechanical Properties of a New High Strength Aluminum Hybrid MMC Based on the ANN Approach for Automotive Application*. *Materials* 2022, 15.
19. Sahoo, S., Sahu, S.N., Sahoo, R.K., Soren, S. and Biswal, S.K., 2021. A study on removal of clay minerals from barbil region iron ore; effect of scrubbing followed by pelletization. *Mining, Metallurgy & Exploration*, 38(1), pp.105-116.
20. Barik, K., Prusti, P., Meikap, B.C., Soren, S., Venugopal, R. and Biswal, S.K., 2021. Investigation on loss on ignition to study the effect of iron ore mineralogy in green pellet growth kinetics. *Transactions of the Indian Institute of Metals*, pp.1-13.
21. Jha, G., Soren, S. and Mehta, K.D., 2021. Carbon footprint assessment with LCA methodology. *LCA based carbon footprint assessment*, pp.1-34.
22. Jha, G., Soren, S. and Mehta, K.D., 2020. Partial substitution of coke breeze with biomass and charcoal in metallurgical sintering. *Fuel*, 278, p.118350.
23. Jha, G., Soren, S. and Mehta, K.D., 2020. Life cycle assessment of sintering process for carbon footprint and cost reduction: A comparative study for coke and biomass-derived sintering process. *Journal of Cleaner Production*, 259, p.120889.
24. Jha, G. and Soren, S., 2017. Study on applicability of biomass in iron ore sintering process. *Renewable and Sustainable Energy Reviews*, 80, pp.399-407.
25. Parida, A.K., Soren, S., Jha, R.N. and Krishnamurthy, N., 2017. Multistage Cup Drawing of Thicker Blanks of Al-Killed AISI 1010 Steel: A Modified Approach. *Transactions of the Indian Institute of Metals*, 70, pp.2059-2070.
26. Parida, A.K., Soren, S., Jha, R.N. and Krishnamurthy, N., 2017. Multistage deep drawing with ironing of al-killed aisi 1040 graded medium carbon steel: a parametric study. *Materials Research*, 20(4), pp.1111-1120.
27. Parida, A.K., Soren, S., Jha, R.N. and Krishnamurthy, N., 2016. Cylindrical Cup Manufacturing Using 12 mm Thick Circular Blanks of AISI 1040 Graded Medium Carbon Steel: an Innovative Approach. *ISIJ International*, 56(8), pp.1452-1461.
28. Parida, A.K., Soren, S., Jha, R.N. and Sadhukhan, S., 2016. 12 mm thick circular blanks of Al-killed AISI 1020 steel-applied for cylindrical cup manufacturing by multistage deep drawing with simultaneous ironing. *Materials Research*, 19, pp.965-976.
29. Chowdhury, S.G., Srivastava, V.C., Ravikumar, B. and Soren, S., 2006. Evolution of Texture During accumulative roll bonding (ARB) and its comparison with normal cold rolled aluminium–manganese alloy. *Scripta Materialia*, 54(9), pp.1691-1696.

Conference Publications:

1. Kumar, Navin, and Shatrughan Soren. "Magnesium metal nano composites-A solid state hydrogen storage material." *Materials Today: Proceedings* (2023).
2. Priyadarshini, Saigeeta, Shatrughan Soren, and Geeta Durga. "Effect of waste marble dust powder as a filler material on mechanical properties and water uptake capacity of Epoxy/glass fiber composites." *Materials Today: Proceedings* (2023).
3. Priyadarshini, Saigeeta, Lavish Kumar Singh, Chandra Kant Kaithwas, and Shatrughan Soren. "A review on thermo-mechanical durability of glass fiber/polymer composites in water." In *Macromolecular Symposia*, vol. 407, no. 1, p. 2200124. 2023.
4. Kumar, Navin, and Shatrughan Soren. "Effect of aluminium in magnesium alloy fabricated through the squeeze casting process." *Proceedings of Fourth International Conference on Inventive Material Science Applications: ICIMA 2021*. Springer Singapore, 2022.
5. Nirala, A., Soren, S., Kumar, N., Kumar, R., Shrivastava, A. K., Prasad, H., ... & Yadav, J. K. (2021, May). Study of Fabrication and Mechanical Characterization of Magnesium Metal Matrix Composites. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1149, No. 1, p. 012006). IOP Publishing.
6. Nirala, A., Soren, S., Kumar, N., Garg, R., Sharma, S.K., Shrivastava, A.K., Singh, D.B., Yadav, D. and Yadav, J.K., 2021. Comprehensive study of magnesium based metal matrix composite. *Materials Today: Proceedings*, 46, pp.6587-6591.
7. Nirala, A., Soren, S., Garg, R., Kumar, R., Shrivastava, A.K., Kumar, N., Prasad, H., Singh, D.B. and Yadav, J.K., 2021. Study of biodegradable magnesium metal matrix composite A review. *Materials Today: Proceedings*, 46, pp.6592-6595.
8. Jaiswal, R.K., kumar Acharya, D. and Soren, S., 2020, February. Beneficiation of goethite iron ore through magnetizing roasting followed by magnetic separation. In *IOP Conference Series: Materials Science and Engineering* (Vol. 748, No. 1, p. 012008). IOP Publishing.
9. Kumar, Navin, and Shatrughan Soren. "Selection of reinforcement for Al/Mg alloy metal matrix composites." *Materials Today: Proceedings* 21 (2020): 1605-1609.
10. Nirala, A., Soren, S., Kumar, N. and Kaushal, D.R., 2020. A comprehensive review on mechanical properties of Al-B4C stir casting fabricated composite. *Materials Today: Proceedings*, 21, pp.1432-1435.
11. Nirala, A., Soren, S., Kumar, N., Dwivedi, V.K. and Kaushal, D.R., 2020. A comprehensive review on stir cast Al-SiC composite. *Materials today: proceedings*, 21, pp.1610-1614.
12. Kumar, Navin, Shravan Kumar, and Shatrughan Soren. "Performance analysis of beneficiation of coal tailings by froth flotation." *AIP Conference Proceedings*. Vol. 2091. No. 1. AIP Publishing, 2019.
13. Soren, S., 2017. Effect of deformation on the structure and properties of interstitial free steels. *Materials Today: Proceedings*, 4(8), pp.9029-9038.

Book Chapter:

- i. Jha, Gaurav, Shatrughan Soren, and Kapil Deo Mehta. "Carbon footprint assessment with LCA methodology." *LCA based carbon footprint assessment* (2021): 1-34.

Patent:

1. “A Method For Fabricating Nanomaterial Reinforced Aluminum Based Hybrid Nanocomposite” Akhileshwar Nirala, Shatrughan Soren, Ashish Kumar, Krishna Kumar, Gaurav Sharma, Anil Shrivastava, Rajendra Prasad, Rashmi Maheshwari and Haridwar Prasad, **Patent number:** 2021107368, Granted:2021.