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Patents

1. An Indian Patent with patent No. 477549 and titled, “A rubberized steel slag based thermally insulated geopolymer” was granted on 6th December 2023.

Research Publication

1. Janga, Supriya, Ashwin Narendra Raut and **Murmu Anant Lal**, (2024), Assessment of thermal and mechanical properties of fly ash based geopolymer blocks with a sustainability perspective using multi-criteria decision-making approach. *Journal of Building Engineering*, 88, 109261, DOI: 10.1016/j.jobbe.2024.109261
2. Raut Ashwin N, Adamu Musa, Khed Veerendrakumar C, **Murmu Anant Lal** and Ibrahim Yasser E, (2023), Effects of agro-industrial by-products as alumina-silicate source on the mechanical and thermal properties of fly ash based-alkali activated binder. *Case Studies in Construction Materials*, 18, e02070, DOI: 10.1016/j.cscm.2023.e02070 (**SCI, IF=6.2**)
3. Raut Ashwin N, **Murmu Anant Lal** & Alomayri Thamer, (2023), Physico-Mechanical and thermal behavior of prolonged heat Cured geopolymer blocks. *Construction and Building Materials*, 370, 130309, DOI: 10.1016/j.conbuildmat.2023.130309 (**SCI, IF=7.4**)
4. Raut Ashwin N, Singh Ranjit, **Murmu, A. L.** & Khan, K. A. (2022), Evaluation of thermal and energy consumption of novel foamed copper slag based geopolymer masonry blocks. *Ceramics International*, 48 (9), 12098-12111, DOI: 10.1016/j.ceramint.2022.01.070 (**SCI, IF=5.2**)
5. Singh Ranjit, Raut Ashwin, **Murmu, Anant Lal** & Mohammad Jamil (2021), Influence of glass powder incorporated foamed geopolymer blocks on thermal and energy analysis of building envelope. *Journal of Building Engineering*, 43, 102520. DOI:10.1016/j.jobbe.2021.102520 (**SCI, IF=6.4**)

6. **Murmu, Anant Lal** & Patel, A. (2020), Studies on the Properties of Fly Ash-Rice Husk Ash Based Geopolymer for Use in Black Cotton Soils. *International Journal of Geosynthetics and Ground Engineering*, 6(38), 1-14. DOI: 10.1007/s40891-020-00224-z (**Scopus, IF=2.54**)
7. **Murmu, Anant Lal**, Jain, A., & Patel, A. (2019), Mechanical Properties of Alkali Activated Fly Ash Geopolymer Stabilized Expansive Clay. *KSCE Journal of Civil Engineering*, 23(9), 3875-3888. DOI: 10.1007/s12205-019-2251-z (**SCI, IF=2.11**)
8. **Murmu, Anant Lal**, Dhole, N., & Patel, A. (2018). Stabilization of Black Cotton Soil for Subgrade Application Using Fly Ash Geopolymer. *Road Materials and Pavement Design*, 21, 867-885. DOI: 10.1080/14680629.2018.1530131 (**SCI, IF=3.805**)
9. Singh, D. K., Mandal, A., Karumanchi, S. R., **Murmu, Anant Lal**, & Sivakumar, N. (2018). Seismic Behaviour of Damaged Tunnel During Aftershock. *Engineering Failure Analysis*, 93, 44-54. DOI: 10.1016/j.engfailanal.2018.06.028 (**SCI, IF=4**)
10. **Murmu, A. L.**, & Patel, A. (2018). Towards Sustainable Bricks Production: An Overview. *Construction and Building Materials*, 165, 112-125. DOI: 10.1016/j.conbuildmat.2018.01.038 (**SCI, IF=7.4**)

Conference Publication

1. Prashant Sawarkar, Amol Pote & **Anant Lal Murmu**, "Properties of blast furnace slag geopolymer concrete, in International Conference on Construction Materials and Structures at National Institute of Technology, Calicut, Kerala, (2022) Published on March 2023 in Materials Today Proceedings. (**Scopus**)

Book Chapter

1. Anant Lal Murmu and Ashwin N Raut, "Mechanical, thermal and durability properties of demolition waste concrete – Epicenter to thermal insulating

material” in Development of sustainable thermal insulators from waste materials: A circular economy approach edited by Sarika Verma, Mohd. Akram Khan and A K Sirivastava, Springer

2. Ashwin N Raut and **Anant Lal Murmu**, “Building a Sustainable Future with Geopolymer Thermal Insulation: Availability and Opportunities” in Development of sustainable thermal insulators from waste materials: A circular economy approach edited by Sarika Verma, Mohd. Akram Khan and A K Sirivastava, Springer