

## Publications in Journals – 2025

1. Shabir Dar, Soumik Bhattacharya, S. Bhattacharyya, G. H. Bhat, S. Jehangir, J. A. Sheikh, R. Banik, S. Nandi, G. Mukherjee, Sajad Ali, S. Chakraborty, S. Chatterjee, S. Das, S. Das Gupta, A. Dhal, S. S. Ghugre, A. Goswami, D. Mondal, S. Mukhopadhyay, S. Pal, D. Pandit, R. Raut, P. Ray, “Coexistence of single-particle and collective states in  $^{116}\text{Sb}$ ”, *Physical Review C* 111 (2025) 14328
2. Ram Kumar Paul, R. Bhattacharjee, S. Bitragunta, A. Das, A. Banerjee, P. Dhara, T. Samanta and S. Pal, “Residual analysis based neutron-gamma pulses segregation of liquid scintillator detector”, *Journal of Instrumentation* 20 (2025) P01015
3. R. Mondal Saha, K. Banerjee, A. Chakraborty, N. Gayathri, Souvik Jana, Satya Samiran Nayak, G. R. Umapathy, Anirban Basak, S. Bhattacharyya, R. Shil, Satyajit Hazra, Saif Ahmad Khan, “Preparation of selenium target using sedimentation method for in-beam gamma-ray spectroscopic measurement”, *Nuclear Instruments and Methods in Physics Research Section A* 1074 (2025) 170288
4. Ekata Nandy, Subhasis Chattopadhyay, “Searching for initial state fluctuations in heavy ion collisions at FAIR energy using principal component analysis”, *The European Physical Journal A* 61 (2025) 39
5. Akash Mitra, Sanku Paul, Shashi C. L. Srivastava, “Quantum criticality and universality in the stationary state of the long-range Kitaev model”, *Physical Review B* 111 (2025) 104308
6. A. Pal, P. Behre, M. K. Jha, S. Basak, Devesh Kumar, S.S. Alam, S. Roy, J. -M. Regis, T. Bhattacharjee and T. Bhattacharjee, “Design of GAMMA-GAMMA fast timing setup VENTURE-2.0 with  $\text{CeBr}_3$  detectors”, *Journal of Instrumentation* 20 (2025) P02022
7. Sujan Kumar Roy, Gargi Chaudhuri, “I-C-Q relations for rapidly rotating stable hybrid stars”, *Astroparticle Physics* 170 (2025) 103108

8. S. Basak, D. Kumar, T. Bhattacharjee, I. Dedes, J. Dudek, A. Pal, S. S. Alam, A. Saha, A. K. Sikdar, J. Nandi, Shabir Dar, A. Baran, A. Gaamouci, D. Rouvel, S. Samanta, S. Chatterjee, R. Raut, S. S. Ghugre, A. Adhikari, Y. Sapkota, R. Rahaman, Ananya Das, A. Gupta, A. Bisoi, S. Sharma, S. Das, A. Bhattacharyya, P. Das, U. Datta, I. Ray, J. Yang, D. Curien, and G. Duchêne, “New evidence of interplay between tetrahedral and octahedral symmetries and symmetry breaking: Exotic rotational bands in  $^{152}\text{Sm}$ ”, *Physical Review C* 111 (2025) 34319
9. D. Sarkar, S. Das, V. Taneja, M. Samanta, K. Jagadish, A. Das, M. Bhakar, S. Perumal, G. Sheet, Dirtha Sanyal, K. Pal, N. Ravishankar, U. V. Waghmare, and K. Biswas, “Glassy Thermal Transport Triggers Ultra-High Thermoelectric Performance in  $\text{GeTe}$ ”, *Advanced Materials* 37 (2025) 2417561
10. J. Mukherjee, D. Bhowmik, S. Bhowmick, Prasanta Karmakar, S. Bhattacharjee, “Low energy ion-beam mediated tailoring of structural, optical, and electrical properties of ITO films”, *Surface & Interface* 59 (2025) 105973
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14. Suman Pal, Soumen Podder, and Gargi Chaudhuri, “Is the Central Compact Object in HESS J1731-347 a Hybrid Star with a Quark Core? An Analysis with the Constant Speed of Sound Parameterization”, *The Astrophysical Journal* 983 (2025) 24
15. Trijit Kumar Maiti, “Exergy evaluation through experimental validation of a helium liquefier model under various off-design mixed mode operations with and without LN<sub>2</sub> pre-cooling”, *Fusion Engineering and Design* 215 (2025) 114966

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