

Publications in Journals – 2026

1. Soumen Podder, Sujan Kumar Roy, Suman Pal, Gargi Chaudhuri, “High mass pulsars as hybrid stars: Phase transitions and oscillation modes”, *Journal of High Energy Astrophysics* 49 (2026) 100457
2. Sourav Duari, Nilanjan Chaudhuri, Pradip Roy, Sourav Sarkar, “Dynamical color conductivity of a chiral quark-gluon plasma”, *Physical Review D* 113 (2026) 14011
3. T. Bhattacharjee, A. Pal, D. Kumar, S. Basak, S.S. Alam, “Lifetime measurements with fast timing scintillation detectors at VECC, Kolkata”, *Nuclear Physics A* 1065 (2026) 123254
4. S. Chakraborty, S. Bhattacharyya, S.S. Nayak, Soumik Bhattacharya, G. Mukherjee, Snigdha Pal, S. Panwar, Suchorita Paul, S. Jehangir, G.H. Bhat, J.A. Sheikh, C. Majumder, A. Sharma, Pankaj K. Giri, R. Raut, S.S. Ghugre, “Low-j rotational bands in ^{127}Xe ”, *Nuclear Physics A* 1065 (2026) 123251
5. ALICE Collaboration, “Exclusive photoproduction of excited p mesons decaying to four pions in ultraperipheral Pb–Pb collisions at root $s_{\text{NN}}=5.02$ TeV”, *Physics Letters B* 872 (2026) 140006
6. Habibur Rahaman, S. Rajbanshi, Abhijit Bisoi, G. Manna, R. Biswas, Saikat Sen, R. Palit, Sajad Ali, F. S. Babra, R. Banik, S. Bhattacharya, S. Bhattacharyya, P. Dey, Md. S. R. Laskar, G. Mukherjee, S. Nandi, H. Pai, Rajkumar Santra, T. Trivedi, “Coexistence of shapes and octupole correlation in ^{82}Kr ”, *Physical Review C* 113 (2026) 14309
7. Subhadeep Paul, Tumpa Biswas, Dibakar Dhar, Zubayer Ahammed & Prabir Kumar Haldar, “Net-charge fluctuations in p-Pb collisions at root $s_{\text{NN}}= 5.02$ TeV: insights from the AMPT model”, *The European Physical Journal Plus* 141 (2026) 12
8. Tapatee Kundu Roy, “Grain growth kinetics, microhardness and nonlinear electrical properties of ZnO-V₂O₅-Nb₂O₅ varistor ceramics”, *Solid State Communications* 409 (2026) 116295

9. Atreyee Dey , A. K. Singh, Anwesha Basu, Somnath Nag, G. Mukherjee, S. Bhattacharyya, S. Nandi, S. Bhattacharya, R. Banik, R. Raut , S. S. Ghugre, S. Das, S. Samanta, S. Chatterjee, A. Goswami, S. Ali, H. Pai, S. Rajbanshi, “Investigation of new and evolving structures in ^{125}Te using γ spectroscopy”, *Physical Review C* 113 (2026) 24319
10. A. Karmakar, P. Datta, S.S. Nayak, Soumik Bhattacharya, Suchorita Paul, Snigdha Pal, S. Bhattacharyya, G. Mukherjee, S. Basu, S. Chakraborty, S. Panwar, Pankaj K. Giri, R. Raut, S.S. Ghugre, R. Palitg, Sajad Ali, W. Shaikh, S. Chattopadhyay, “ ^{98}Mo : A possible candidate for octupole collectivity in $A \approx 100$ region”, *Nuclear Physics A* 1066 (2026) 123265
11. Saumanti Sadhukhan, S. Mukhopadhyay, Saswata Roy, Debasish Mondal, Deepak Pandit, Surajit Pal, R. Shil, K. Banerjee, S. Bhattacharyya, “A novel setup of $\text{LaBr}_3(\text{Ce})\text{-NaI}(\text{Tl})$ phoswich and BaF_2 detectors for gamma-ray measurement with anti-Compton and addback features”, *Nuclear Instruments and Methods in Physics Research Section A, Part 1* 1082 (2026) 170913
12. Dharmendra Singh, Amritraj Mahato, Nitin Sharma, Rajesh K. Sahoo, Rahul Mahato, Lupteindu Chhura, Mohd. Usman, Rahbar Ali, M. Afzal Ansari, M. Ismail, “Production of ^{57}Co and ^{51}Cr isotopes for medical application in the interaction of ^{16}O projectile with ^{45}Sc target”, *Nuclear Physics A* 1066 (2026) 123285
13. CBM Collaboration, “Performance of the prototype Silicon Tracking System of the CBM experiment tested with heavy-ion beams at SIS18”, *Nuclear Instruments and Methods in Physics Research Section A, Part 2* 1082 (2026) 171059
14. E. H. Wang, M. Abushawish, J. H. Hamilton, A. Navin, S. Bhattacharyya, J. Dudouet, G. H. Bhat, J. A. Sheikh, S. Jehangir, S. Y. Wang, S. Sun, B. Qi, M. Rejmund, A. Lemasson, Y. H. Kim, E. Clément, F. Didierjean, R. Y. Dong, G. Duchêne, B. Jacquot, C. F. Jiao, Y. X. Luo, C. Michelagnoli, A. V. Ramayya, J. O. Rasmussen, C. Schmitt, O. Stezowski, W. Z. Xu, H. Zhang and S. J. Zhu, “First Observation of Multiphonon gamma-Vibrations in an Odd-Odd Nuclear System”, *Physical Review Letters* 136 (2026) 72501

15. S. Srinidhi, Shashi C. L. Srivastava, Jayendra N. Bandyopadhyay, “Entanglement signatures of gapless topological phases in a p-wave superconductor”, *Physical Review B* 113 (2026) 64509
16. Govind Kumar Mishra, Hemendra Kumar Pandey, Nagendra Prasad Pathak, “High selective SIW bandpass filter with flexible bandwidth and transmission zero for 5G application”, *Scientific Reports* 16 (2026) 9639
17. Sachin Kumar Singha, S. K. Tandel, Saket Sumana, Harsh Kumara, M. Hemalatha, S. Hingeb, P. Singh, S. Mestri, Madhu, Dhananjaya Sahoo, A. Y. Deo, P. K. Nayak, S. Mukhopadhyay, G. Mukherjee, S. Bhattacharyya, T. Bhattacharjee, S. Chakraborty, Soumik Bhattacharya, S. S. Nayak, S. Panwar, S. Pal, Devesh Kumar, A. Pal, S. Basak, Pankaj K. Giri, A. Sharma, S. Kundu, R. Raut, S. S. Ghugre, “Configurations of high-K band structures in Hf isotopes”, *Nuclear Physics A* 1067 (2026) 123301
18. V. Kumar, S. Ali, M. Das, N. Biswas, S. Das, S. Sahoo, N. Chaddha, J. Basu, V. N. Jha, “Response of tetrafluoroethane (C₂H₂F₄) superheated emulsion detector for dark matter search at JUSL”, *Nuclear Instruments and Methods in Physics Research Section A* 1083 (2026) 171101
19. Krishna Debnath, Aniruddha Dey, P.K. Nayak, A.K. Mondal, R. Shil, A. Kundu, Biswajit Das, K. Mandal, S. Biswas, P. Dey, A. Bairagya, Vishal Malik, A. Sindhu, B. Mukherjee, D. C. Biswas, R. Palit, K. Banerjee, S. Mukhopadhyay, A. Chakraborty, “Exploring fission dynamics of ²³²Th(⁹Be,f) following prompt γ -ray spectroscopy”, *Physics Letters B* 874 (2026) 140249
20. Akash Mitra, Shashi C. L. Srivastava, “Dynamical quantum phase transitions through the lens of mode dynamics”, *Physical Review B* 113 (2026) 104309
21. Mahuya Chakrabarti, Apurba Kumar Nayek, Bidyut Haldar, Sudipta Moshat, Dirtha Sanyal, “Preparation and characterization of ferromagnetic Cu doped ZnO”, *Current Applied Physics* 84 (2026) 75
22. Sourav Duari, Nilanjan Chaudhuri, Sourav Sarkar, Pradip Roy, “Plasminos in chiral QCD plasma”, *European Physical Journal A* 62 (2026) 74

23. Javed Aktar Khan, Sulagna Ghosh, Dirtha Sanyal, “An ab-initio studies of the magnetic properties of transition metal ion doped GeO₂ monolayer”, Computational Condensed Matter 46 (2026) e01237
24. S. Dalal, K. Banerjee, G. Mukerjee, T.K. Rana, P. Roy, S. Manna, S. Roy, R. Shil, S.R. Singh, P. Pant, S. Adhikary, S. Kundu, T.K. Ghosh, A. Sen, R. Pandey, B. Layek, S. Sadhukhan, S. Dawn, “Gamma-ray spectroscopy using deuterated liquid scintillator EJ315 detector”, Nuclear Instruments and Methods in Physics Research Section A 1084 (2026) 171275
25. Amit Paul, Rupa Chatterjee, “Initial state and evolution of the hot and dense medium produced in isobaric collisions at 200A GeV at the BNL Relativistic Heavy Ion Collider”, Physical Review C 113 (2026) 44901
26. B. Ashna, M. Shareef, A. Shamlath, P. V. Laveen, A. C. Visakh, A. Jhingan, A. K. Nasirov, E. D. Khusanov, Jhiam Sadhukhan, N. Saneesh, K. S. Golda, Mohit Kumar, S. K. Duggi, Shiva Prasad Nayak, S. Ramakrishna Reddy, K. Pameela, S. Appannababu, P. V. Madhusudhana Rao, A. M. Vinodkumar, P. Sugathan, E. Prasad, “Fission and quasifission studies in the 30Si+197Au reaction”, Physical Review C 113 (2026) 34606
27. Dipta Pratim Dutta, Vaishali Naik, Hemendra Kumar Pandey, Siddhartha Dechoudhury and Arup Bandyopadhyay, “External frequency tuner for 4-rod RFQ in the VECC RIB facility”, Journal of Instrumentation 21 (2026) 3045
28. M. Dey Sarkar, S. Ghosal, D. Jana and D. Sanyal, “Harnessing Topological States for Enhanced Thermoelectricity in the half-Heusler compound FeMnTe”, The Journal of Physical Chemistry C 130 (2026) 3560
29. V. Singh, P. Moar, D. Sanyal, S. Barua and J. Dhar, “Role of positional isomerism on A-site organic cation: structural variation driven photophysical and ferroelectric responses in centrosymmetric layered perovskites”, Journal of Materials Chemistry C 130 (2026) 3560
30. Sunaina, Sourav Mondal, Dulal Senapati, Goutam Pramanik, Prasanta Karmakar Carbon Ion Engineering of Silicon Cathodes for Enhanced Photoelectrochemical Hydrogen Evolution”, Langmuir 42 (2026) 6227

31. Koushik Mondal, Dip Manna, Pawan Kumar Ojha, Prasanta Karmakar, Supratic Chakraborty, “Establishing a relation between surface roughness and non-volatile resistive switching in VO₂-x -based devices: A temperature dependent study”, *Journal of Alloys and Compounds* 1060 (2026) 187276
32. STAR Collaboration, “Observation of charmonium sequential suppression in heavy-ion collisions at the Relativistic Heavy Ion Collider”, *Physical Review Letters* 136 (2026) 122302
33. STAR Collaboration, “Measurement of medium-induced acoplanarity in central Au+Au and pp collisions at $\sqrt{s_{NN}} = 200$ GeV using direct-photon+jet and π^0 +jet correlations”, *Physical Review C* 113 (2026) 14902
34. STAR Collaboration, “Search for the chiral magnetic effect through beam energy dependence of charge separation using event shape selection”, *Physical Review C* 113 (2026) 14912
35. STAR Collaboration, “Measuring spin correlation between quarks during QCD confinement”, *Nature* 650 (2026) 65
36. STAR Collaboration, “Measurement of the longitudinal flow-plane decorrelation using multi-plane cumulants in $\sqrt{s_{NN}} = 200$ GeV Au+Au, Ru+Ru, and Zr+Zr collisions”, *Physical Review C* 113 (2026) 24908
37. STAR Collaboration, “Measurement of Kaon Directed Flow in Au+Au Collisions in the High Baryon Density Region”, *Physics Letters B* 875 (2026) 140353
38. U. S. Ghosh, S. Rai, A. K. Mondal, K. Mandal, S. Biswas, S. Chakraborty, G. Mukherjee, A. Sharma, Indu Bala, R. P. Singh, S. Muralithar, A. Chakraborty, B. Mukherjee, “Delicate interplay between single-particle and collective degrees of freedom for generating the excited states of ^{67}Ga ”, *Physical Review C* 113 (2026) 24315
39. WASA-FRS / Super-FRS Experiment Collaboration, “Performance of newly constructed plastic scintillator barrel in the WASA-FRS experiments and evaluation of radiation damage effects on multi-pixel photon counter”, *Nuclear Instruments and Methods in Physics Research Section A* 1083 (2026) 171065

40. Sujoy Chatterjee, K. Banerjee, S. Dawn, Arijit Sen, S. Manna, A. K. Bakshi, Pratap Roy, V. N. Jha, R. Datta, B. K. Sapra, “Depth-dependent background neutron distribution at the deep underground laboratory, Physics Letters B 875 (2026) 140337
41. M. Abushawish, E. H. Wang, J. Dudouet, A. Navin, E. Clément, G. Duchêne, J. H. Hamilton, A. Lemasson, C. Michelagnoli, O. Stezowski, S. Bhattacharyya, F. DidierJean, B. Jacquot, Y. H. Kim, Y. X. Luo, A. V. Ramayya, J. O. Rasmussen, S. J. Zhu, “Shape evolution in neutron-rich odd-even $^{105-109}\text{Nb}$ isotopes”, Physical Review C 113 (2026) 14308
42. D. Kumar, S. Basak, A. Pal, D. Banerjee, S. S. Alam, S. Rajbanshi, T. Bhattacharjee, “Lifetimes and transition probabilities in $N = 76$, ^{130}Xe ”, Nuclear Physics A 1069 (2026) 123354
43. Suman Pal and Gargi Chaudhuri, “Characterizing the quark-hadron mixed phase in compact star cores: Sensitivity to nuclear saturation and quark-model parameters at finite temperature”, Physical Review D 113 (2026) 103006
44. R. Mondal Saha, K. Banerjee, N. Gayathri, Saif Ahmad Khan, S. Dalal, R. Shil, P. Pant, S.R. Singh, T. Bar, K.S. Golda, “Challenges and methods in fabricating solid lithium-compound targets”, Nuclear Instruments and Methods in Physics Research Section A 1085 (2026) 171281
45. Moupriya Mukherjee, Sudip Bhowmick, Tanmoy Chakraborty, Mitali Patra, Sajid Nawaz, Soumyaditya Sutradhar, Amit K. Chakraborty, Uday Deshpande, Prasanta Karmakar, Joydeep Chowdhury, Goutam Pramanik, “Significant enhancement of photoluminescence and current density of graphene oxide film upon nitrogen ion implantation”, Applied Surface Science 728 (2026) 166094
46. Satabdi Mondal, Enakshi Senapati, Deepak Pandit, Balaram Dey, Pampa Das, Alokumar De, Srijit Bhattacharya, “Analysis of (p,y) capture cross-sections relevant to p-process using TALYS for $A = 75-110$ ”, International Journal of Modern Physics E 35 (2026) 2650006