

List of Publications
(2000-)

A. Nuclear Physics

B. Atomic and Condensed matter Physics

C. Interdisciplinary Areas and Applications

A. Nuclear Physics

1. Parity of the band head at 3710 keV in ^{99}Rh using clover detector as Compton polarimeter: R. Palit, H.C. Jain, P.K. Joshi, S. Nagaraj, B.V.T. Rao, S.N. Chintalapudi and S.S. Ghugre, *Pramana* **54**, 347 (2000)
2. Incomplete fusion reactions in $^{16}\text{O} + ^{165}\text{Ho}$, Anil Sharma, B. Bindukumar, S. Mukherjee, S. Chakrabarty, B.S. Tomar, A. Goswami, G.K. Gubbi, S.B. Manohar, A.K. Sinha and S.K. Datta, *Pramana* **54**, 355 (2000)
3. Measurement of quasi-elastic and transfer excitation functions in ^{16}O , $^{19}\text{F} + ^{232}\text{Th}$ reactions, Shrabani Sinha, R. Varma, R.K. Choudhury, B.K. Nayak, A. Saxena, R.G. Thomas and B.V. Dinesh, *Phys. Rev. C* **61**, 034612 (2000)
4. Effect of projectile ground state spin on fission anisotropies in ^{10}B , $^{11}\text{B} + ^{232}\text{Th}$ reactions, B.K. Nayak, R.G. Thomas, R.K. Choudhury, A. Saxena, P.K. Sahu, S.S. Kapoor, Raghav Varma and D. Umakant, *Phys. Rev. C* **62**, 031601R (2000)
5. The Absorption matrix for Fusion in Coupled Reaction Channels Calculations, S.V.S. Sastry, *Phys. Rev. C* **62**, 37602 (2000)
6. Fission fragment anisotropies for $^{19}\text{F} + ^{209}\text{Bi}$ system, A.M. Samant, S. Kailas, A. Chatterjee, P. Singh, A. Navin, A. Shrivastava, *Eur. Phys. J. A* **7**, 59 (2000)
7. Structure Information from Fusion Barriers, S.V.S.Sastry and S. Santra, *Pramana* **54**, 813 (2000)
8. Complete and incomplete fusion reactions in $^{12}\text{C} + ^{169}\text{Tm}$, S. Chakrabarty, B.S. Tomar, A. Goswami, G.K. Gubbi, S.B. Manohar, Anil Sharma, B. Bindukumar and S. Mukherjee, *Nucl. Phys. A* **678**, 355 (2000)
9. Mass distribution in ^{12}C induced fission of ^{232}Th , A.Ramaswami, G.K.Gubbi, A. Goswami, B.S. Tomar and S.B. Manohar, *J.Radioanalytical and Nuclear Chemistry*, **246**, 225 (2000)
10. Incomplete fusion reactions: Analysis of excitation functions and recoil range distributions in $^{16}\text{O} + ^{51}\text{V}$, Anil Sharma, S. Mukherjee, S. Sodaye, B.S. Tomar, A. Goswami and S.B. Manohar, *Euro. Phys. Journal A* **12**, 199 (2001)
11. Transition Quadrupole moments in ^{72}Se , R. Palit, H.C. Jain, P.K. Joshi, J.A. Sheikh, Y. Sun, *Phys. Rev. C* **63**, 024313 (2001)
12. The heavy-ion nuclear potential: determination of a systematic behavior at the region of surface interaction distances, C. P. Silva, M. A. G. Alvarez, L. C. Chamon, D. Pereira, M. N. Rao, E. S. Rossi Jr., L. R. Gasques, M. A. E. Santo, R. M. Anjos, J. Lubian, P. R. S. Gomes, C. Muri, B. V. Carlson, S. Kailas, A. Chatterjee, P. Singh, A. Shrivastava, K. Mahata, S. Santra, *Nuclear Physics A* **679**, 287 (2001)
13. Projected shell model study of yrast-band structures near $A=80$, R.Palit, J.A. Sheikh, Y. Sun and H.C. Jain, *Nucl. Phys. A* **686**, 141 (2001)
14. Light charged particle emission in heavy-ion reactions – What have we learnt? S. Kailas, *Pramana* **57**, 1 (2001)
15. Nuclear structure and Indian Clover array, H.C. Jain, *Pramana* **57**, 21 (2001)
16. High spin structure of yrast band in ^{78}Kr , P.K. Joshi, H.C. Jain, R.Palit and S. Nagaraj, *Pramana* **57**, 185 (2001)
17. Structure of $^{72,74}\text{Se}$ at high spin, R. Palit, H.C. Jain, P.K. Joshi and J.A. Sheikh, *Pramana* **57**, 191 (2001)
18. Breakup of 42 MeV ^7Li projectiles in the fields of ^{12}C and ^{197}Au nuclei, Dhruva Gupta, C. samanta, R. Kanungo, P. Basu, Subinit Roy, S. Kailas, A. Chatterjee, B. J. Roy, K. Mahata, A. Samant and A. Srivastava; *Pramana* **57**, 209 (2001)
19. Fabrication and testing of recoil mass separator at Bombay Pelletron, S. Nagaraj, H.C. Jain, P.K. Joshi, S.D. Paul, R. Palit., H.V. Panchal, B.S. Naidu, A. Chatterjee and A. Navin, *Pramana* **57**, 219 (2001)
20. Recent studies in heavy ion induced fission reactions, R.K. Choudhury *Pramana* **57**, 585 (2001)

21. Level density parameter in A~108-204 nuclei at medium excitation energy, B. John, R.K. Choudhury, B.K. Nayak, A. Saxena and D.C. Biswas Phys. Rev. **C63**, 054301 (2001)
22. Collectivity against Nucleon Transfer in Sub-barrier Fusion of $^{12}\text{C} + ^{194,198}\text{Pt}$, A. Shrivastava, S. Kailas, A. Chatterjee, A. Navin, A.M. Samant, P. Singh, S. Santra, K. Mahata, B.S. Tomar, G. Pollarolo, Phys. Rev. **C63**, 054602 (2001)
23. Evidence of correlated transfer of valence nucleons in multi particle stripping channels in the $^{18}\text{O} + ^{174}\text{Yb}$ reaction, P.K. Sahu, R.K. Choudhury, D.C. Biswas and B.K. Nayak, Phys. Rev. **C64**, 014609 (2001)
24. Coupled reaction channel analysis of elastic, inelastic, transfer and fusion cross-sections for $^{12}\text{C} + ^{208}\text{Pb}$; S. Santra, P. Singh, S. Kailas, A. Chatterjee, A. Shrivastava and K. Mahata, Phys. Rev. **C64**, 024602 (2001)
25. Fusion barrier distribution from quasi-elastic excitation function measurements in $^{16,18}\text{O} + ^{120,124}\text{Sn}$ systems, Sinha Shrabani, M.R. Pahlvani, R. Varma, R.K. Choudhury, B.K. Nayak and A. Saxena, Phys. Rev. **C64**, 024607 (2001)
26. Shape of ^{80}Kr at high spin, G. Mukherjee, H.C. Jain, R. Palit, P.K. Joshi, S.D. Paul and S. Nagraj, Phys. Rev. **C64**, 034316 (2001)
27. Entrance channel effect in fission fragment anisotropies from $^{11}\text{B} + ^{235}\text{U}$ and $^{14}\text{N} + ^{232}\text{Th}$ systems; Bivash R. Behera, S. Jena, M. Satpathy, S. Kailas, K. Mahata, A. Shrivastava, A. Chatterjee, Subinit Roy, P. Basu, M.K. Sharan and S.K. Datta, Phys. Rev. **C64**, 041602 R (2001)
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30. Shape fluctuation and GDR width – a study from angular momentum gated measurements, D.R. Chakrabarty, Nucl. Phys. **A687**, 184c (2001)
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33. Energy spectra and angular distribution of projectile like fragments in 84 MeV $^{12}\text{C} + ^{169}\text{Tm}$, S. Sodaye, K. Sudarshan, B.S. Tomar A. Goswami, S. Mukherjee and K. Mahata, Euro. Phys. Journal **A14**, 371 (2002)
34. Charge and Mass distribution in ^7Li induced fission of ^{232}Th . R. Tripathi, K. Sudarshan, S. Sodaye, B.S. Tomar, G.K. Gubbi, A. Goswami, A.V.R. Reddy and S.B. Manohar, Radiochim. Acta **90**, 1 (2002)
35. Angular Momentum and Cross Sections for Fusion with Weakly Bound Nuclei: Breakup, a Coherent Effect, Vandana Tripathi, A. Navin, K. Mahata, K. Ramachandran, A. Chatterjee, and S. Kailas, Phys. Rev. Lett. **88**, 172701 (2002)
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37. Possible influence of neutron shell closure ($N_c=126$) on fission anisotropies for $^{19}\text{F} + ^{194,198}\text{Pt}$ systems; K. Mahata, S. Kailas, A. Shrivastava, A. Chatterjee, P. Singh and S. Santra, Phys. Rev. **C65**, 034613 (2002)
38. Level structure of ^{92}Mo at high angular momentum: Evidence for $Z=38$ & $N=50$ core excitation, N.S. Pattabhiraman, S.N. Chintalpudi, S.S. Ghugare, B.V. Tirumala rao, M.L.N. Raju, T. Seshi Reddy, R. Palit, P.K. Joshi and H.C. Jain, Phys. Rev. **C65**, 044324 (2002)
39. Fission fragment anisotropies of ^{10}B , $^{11}\text{B} + ^{237}\text{Np}$ reactions, R. G. Thomas, B. K. Nayak, A. Saxena, D. C. Biswas, L. M. Pant and R. K. Choudhury, Phys. Rev. **C65**, 057601 (2002)

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41. Search for oscillations in evaporation alpha particle spectra from hot compound nuclei. P. Das, A. Ray, S.R. Banerjee, S. Kailas, A. Chatterjee, S.K. Dutta, A. De, S. Saha and S. Roy, *Phys. Rev. C* **66**, 044612 (2002)
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46. Study of $^{194}\text{Tl}^g$ decay, K. Sudarshan, S. Sodaye, R. Tripathi, A. Goswami, B.S. Tomar and A. V. R. Reddy, *Radiochim. Acta* **91**, 1 (2003)
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50. Fission fragment angular distributions: A probe to study heavy-ion fusion dynamics, R. G. Thomas, R. K. Choudhury, A. K. Mohanty, A. Saxena and S. S. Kapoor, *Phys. Rev. C* **67**, 041601R (2003)
51. Hexadecapole deformation studies in $^{148,150}\text{Nd}$, B.S. Nara Singh, V. Nanal and R.G. Pillay, *Pramana* **61**, 507 (2003)
52. Fusion of ^{19}F with $^{188,192}\text{Os}$; K. Mahata, S. Kailas, A. Shrivastava, A. Chatterjee, A. Navin, P. Singh, S. Santra and B.S. Tomar, *Nucl. Phys. A* **720**, 209 (2003)
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65. Fission fragment angular distributions for the systems $^{14}\text{N}+^{232}\text{Th}$ and $^{11}\text{B}+^{235}\text{U}$ at near and sub barrier energies, Bivash R. Behera, M. Satpathy, S. Jena, S. Kailas, R.G. Thomas, K. Mahata, A. Chatterjee, Subinit Roy, P. Basu, M.K. Sharan and S. K. Datta, *Phys. Rev.* **C69**, 064603 (2004)
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71. Production of neutron-deficient nuclei ^{127}Cs and ^{129}Cs by heavy-ion fusion reaction, M. Hemalatha, S. Kailas, K. Mahata, A. Shrivastava, K. Ramachandran and A. Chatterjee, *Nucl. Instr. and Methods* **A531**, 645 (2004)
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78. High spin structure of ^{136}Ce , S. Lakshmi, H.C. Jain, P.K. Joshi, I. Mazumdar, R. Palit, A.K. Jain, S.S. Malik, *Nucl. Phys. A* **761**, 1 (2005)
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C. Interdisciplinary Areas and Applications

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