

**List of Publications
(1988-99)**

A. Nuclear Physics

B. Atomic and Condensed matter Physics

C. Interdisciplinary Areas and Applications

A. Nuclear Physics

1. Entrance channel dependence of fission fragment anisotropies : A direct experimental signature of fission before equilibration, V.S. Ramamurthy, S.S.Kapoor, R.K. Choudhury, A. Saxena, D.M. Nadkarni, A.K. Mohanty, B.K. Nayak, S.V.S. Sastry, S. Kailas, A. Chatterjee, P. Singh and A. Navin, Phys. Rev. Lett. **65**, 25 (1990)
2. On the use of energy dependent barrier of heavy-ion fusion, A.K. Mohanty, S.V.S. Sastry, S.K. Kataria & V.S. Ramamurthy, Phys. Rev. Lett. **65**, 1096 (1990)
3. A new optical model approach for heavy-ion fusion, A.K. Mohanty, S.V.S. Sastry, S.K. Kataria, S. Kailas & V.S. Ramamurthy, Phys. Lett. **B247**, 215 (1990)
4. Sub-barrier fusion in a macroscopic model of nuclear shape evolutions, V.S.Ramamurthy, A.K. Mohanty, S.K. Kataria and N.G. Rangarajan, Phys. Rev. **C41**, 2702 (1990)
5. Shell dependent level densities in nuclear reaction codes, S.K. Kataria, V.S. Ramamurthy, M. Blann and T.T. Komoto, Nucl. Instrum. Meth. **A288**, 585 (1990)
6. Consistency of angular momentum and cross section in near barrier fusion of $^{28}\text{Si}+^{68}\text{Zn}$, $^{32}\text{S}+^{64}\text{Ni}$ and $^{37}\text{Cl}+^{59}\text{Co}$, M. Dasgupta, A. Navin, Y.K. Agarwal, C.V.K. Baba, H.C. Jain, M.L. Jhingan and A. Roy, Phys. Rev. Lett. **66**, 1414 (1991)
7. Fission fragment angular distributions for the system $^{19}\text{F} + ^{232}\text{Th}$, S. Kailas, A. Navin, A. Chatterjee, P. Singh, R.K. Choudhury, A. Saxena, D.M. Nadkarni, S.S. Kapoor, V.S. Ramamurthy, B.K. Nayak and S.V. Suryanarayana, Phys. Rev. **C43**, 1466 (1991)
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9. Shape coexistence and extreme deformation near $A=80$, J.P. Maharana, Y.K. Gambhir, J.A. Sheikh and P. Ring, Phys. Rev. **C46**, R1163 (1992)
10. Coulomb-modified Glauber model description of heavy ion elastic scattering at low energies, S.K. Charagi and S.K. Gupta, Phys. Rev. **C46**, 1982 (1992)
11. Experimental determination of energy dependent barriers for fusion, A.K.Mohanty, S.V.S. Sastry, S.K. Kataria and V.S. Ramamurthy, Phys. Rev. **C46**, 2012 (1992)
12. Complete and incomplete fusion in $^{12}\text{C}+^{93}\text{Nb}$ and $^{16}\text{O}+^{89}\text{Y}$ reactions, B.S. Tomar, A. Goswami, A.V.R. Reddy, S.K. Das, P.P. Burte, S.B. Manohar and Satya Prakash, Z. Phys. **A343**, 223 (1992)
13. High spin states in ^{120}Xe , J. Goswamy, A. Sharma, D. Mehta, B. Chand, N.Singh, P.N. Trehan, P. Singh, R.G. Pillay, H.G. Devare, R.K. Bhowmik and C.R.Praharaj, Z. Phys. **A344**, 125 (1992)
14. Yields of evaporation residues and average angular momentum in heavy ion induced fusion reactions leading to compound nucleus ^{96}Ru , M. Dasgupta, A. Navin, Y.K. Agarwal, C.V.K. Baba, H.C. Jain, M.L. Jhingan and A. Roy, Pramana **38**, 291 (1992)
15. A new polarization potential for heavy-ion fusion spin distribution, A.K.Mohanty, S.K. Kataria and S.V.S. Sastry, Pramana **39**, 547 (1992)
16. Fusion of $^{28}\text{Si}+^{68}\text{Zn}$, $^{32}\text{S}+^{64}\text{Ni}$, $^{37}\text{Cl}+^{59}\text{Co}$ and $^{45}\text{Sc}+^{51}\text{V}$ in the vicinity of the Coulomb barrier, M. Dasgupta, A. Navin, Y.K. Agarwal, C.V.K. Baba, H.C. Jain, M.L. Jhingan and A. Roy, Nucl. Phys. **A539**, 351 (1992)
17. Mass distribution in 72 MeV ^{12}C induced fission of ^{232}Th , S.B. Manohar, A. Goswami, A.V.R. Reddy, B.S. Tomar, S.K. Das, P.P. Burte and Satya Prakash, Radiochemica Acta **56**, 69 (1992)
18. Rotational structure and signature inversion in odd-odd ^{84}Y , S. Chattopadhyay, H.C. Jain, J.A. Sheikh, Y.K. Agarwal and M.L. Jhingan, Phys. Rev. **C47**, R1 (1993)
19. Effect of the pre-fission neutron emission on the fission fragment angular distributions in heavy-ion induced fission, A. Saxena, S. Kailas, A. Karnik and S.S. Kapoor, Phys. Rev. **C47**, 403 (1993)

20. Evidence for superdeformed shape isomeric states in ^{28}Si at excitations above 40MeV through observations of selective particle decays of $^{16}\text{O} + ^{12}\text{C}$ resonances in ^8Be and alpha channels, M.A. Eswaran, Suresh Kumar, E.T. Mirgule, D.R. Chakrabarty, V.M. Datar, N.L. Ragoowansi and U.K. Pal, Phys. Rev. C**47**, 1418 (1993)
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22. Elastic scattering of ^{28}Si from ^{27}Al at 70, 80, 90 and 100 MeV, S.K. Charagi, S.K. Gupta, M.G. Betigeri, C.V. Fernandes and Kuldeep, Phys. Rev. C**48**, 1152 (1993)
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24. High spin states of ^{91}Mo and ^{89}Nb , Pragya Singh, R.G. Pillay, J.A. Sheikh and H.G. Devare, Phys. Rev. C**48**, 1609 (1993)
25. Neutron flow vs collective degrees of freedom for near barrier fusion, S. Kailas and A. Navin, Pramana **41**, 163 (1993)
26. Sub-barrier fission fragment angular distributions for the system $^{19}\text{F} + ^{232}\text{Th}$, S. Kailas, A. Navin, A. Chatterjee, P. Singh, A. Saxena, D.M. Nadkarni, D.C. Biswas, R.K. Choudhury and S.S. Kapoor, Pramana **41**, 339 (1993)
27. L-dependent potential for fusion, S.V.S. Sastry, A.K. Mohanty and S.K. Kataria, Pramana **41**, 525 (1993)
28. Threshold anomaly in $^{16}\text{O} + ^{209}\text{Bi}$, P. Singh, S. Kailas, A. Chatterjee, A. Navin, S.Kerekatte, A.Nijasure and B. John, Nucl. Phys. A**555**, 606 (1993)
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33. Nuclear decay times of evaporation residues of ^{44}Ti by crystal blocking method, Vandana Nanal, M.B. Kurup and K.G. Prasad, Phys. Rev. C**49**, 758 (1994)
34. Entrance channel effects in the fusion-fission time scales from studies of pre-scission neutron multiplicities, A. Saxena, A. Chatterjee, R.K. Choudhury, S.S. Kapoor and D.M. Nadkarni, Phys. Rev. C**49**, 932 (1994)
35. Investigation of complete and incomplete fusion in $^{12}\text{C} + ^{93}\text{Nb}$ and $^{16}\text{O} + ^{89}\text{Y}$ by recoil range measurements, B.S. Tomar, A. Goswami, A.V.R. Reddy, S.K. Das, P.P. Burte, S.B. Manohar and B. John, Phys. Rev. C**49**, 941(1994)
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43. Distribution of fusion barriers, A.K. Mohanty and S.K. Kataria, *Pramana* **53**, 319 (1994)
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C. Interdisciplinary Areas and Applications

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