

## Dr. Samarjit Sihotra

---

Associate Professor  
Department of Physics  
Panjab University, Chandigarh  
Mobile No: 9463576594,  
(e-mail : [ssihotra@pu.ac.in](mailto:ssihotra@pu.ac.in))

### Area of Research

- ❖ Nuclear Structure studies in Experimental Nuclear Physics.
- ❖ Accelerator and Detector- Related R&D and Prototyping.

### Professional background

- Lecturer/Assistant Professor, GNDU, Amritsar (2007 – 2010)
- Assistant Professor, Panjab University, Chandigarh (2010 -2019)
- Associate Professor, Panjab University, Chandigarh (2019 onwards)

### Teaching Experience (courses taught)

Experimental Techniques, Resonance Techniques, Vacuum and Low temperature techniques, Quantum Mechanics, Advanced Quantum Mechanics, Mathematical Physics-I, Mathematical Physics-II, Electrodynamics, Statistical Mechanics, Thermal Physics, Nuclear physics, Particle physics.

### Educational Qualifications

- ❖ M. Sc. Physics -2004
- ❖ Ph. D in *Experimental Nuclear Physics*-2009. *Title of Thesis*  
(Nuclear Structure Studies in  $A \sim 100-130$  Mass region)

### Awards/Scholarships

- ❖ National Scholarship at secondary stage (H.P. Govt.)
- ❖ GATE qualified.
- ❖ CSIR NET- JRF (short listed for Shyama Prasad Mukherjee Fellowship Examination).

## Research Experience and Research Projects

- ❖ Doing research in experimental Nuclear physics .
- ❖ Lifetime measurements , Fast timing measurement.
- ❖ **Working on the projects entitled:**
  1. Accelerator and Detector- Related R&D and Prototyping” In Pre operative Programme for Indian participation in FAIR Project at GSI, Darmstadt, Germany; funded by DST (2009-2013).
  2. Normal deformed and strongly deformed band structures in Lu and Hf- Nuclei; funded by IUAC, New delhi (2011-2014).
  3. Nuclear Structure Studies in  $A \sim 100$  and 130 Mass regions; funded by UGC (2012-2015)
  4. Nuclear Structure studies in some Ag, Rh, and Pd Isotopes close to  $N=Z=50$  shell closure; funded by IUAC, New delhi (2013-2016).
  5. Labr3:Ce; Scintillation detectors for fast timing measurements: funded by DST-SERB (2017-2021).
  6. Multiparticle configurations in some proton rich lu and hf nuclei : funded by iuac (ugc) (2017-2020)
  7. Nuclear structure close to  $z=50$  shell closure nuclei through nuclear fusion evaporation reactions : funded by CSIR (2018-2021)
- ❖ M. Sc dissertation -20.
- ❖ M. Phil thesis Supervised -3.
- ❖ Ph. D thesis supervised and enrolled - 4

Our group is engaged in the study of nuclear structure at high spin, reaction dynamics and mechanism, Coulomb excitation and hyperfine interactions, accelerator and detector related R&D and prototyping at TIFR, Mumbai, GSI, Germany and Inter University Accelerator Center facility at New Delhi.

**PAPERS PUBLISHED IN REFEREED  
INTERNATIONAL RESEARCH JOURNALS**

1. **Rotational structures in the  $^{125}\text{Cs}$  Nucleus;** K. Singh, **S. Sihotra**, S.S. Malik, J. Goswamy, D. Mehta, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, E. S. Paul, J.A. Sheikh, and C.R. Praharaj, Eur. Phys. J. A 27, 321 (2006).
2. **Multiple Band Structures in  $^{131}\text{Cs}$  Nucleus;** **S. Sihotra**, R. Palit, Z. Naik, P.K. Joshi, A.Y. Deo, J. Goswamy, S.S. Malik, D. Mehta, C. R. Praharaj, H.C. Jain, and N. Singh, Physical Review C 78, 034313 (2008).
3. **Band structures in  $^{129}\text{Cs}$ ,** **S. Sihotra**, K. Singh, S.S. Malik, J. Goswamy, R. Palit, Z. Naik, D. Mehta, N. Singh, R. Kumar, R.P. Singh, and S. Muralithar, Physical Review C 79, 044317 (2009).
4. **Structure of dipole bands in  $^{106}\text{In}$ ,** A.Y. Deo, R. Palit, Z. Naik, **S. Sihotra**, S. Kumar, P. K. Joshi, I. Mazumdar, R. Kshetri, D. Mehta, and H.C. Jain, Physical Review C 79, 067304 (2009).
5. **Level structures in the  $^{107}\text{In}$  Nucleus and their microscopic descriptions,** **S. Sihotra**, Z. Naik, R. Palit, A.Y. Deo, S. Kumar, P.K. Joshi, D. Mehta, and N. Singh, Eur. Phys. J. A. 43, 45 (2010).
6. **Structure of degenerate dipole bands in  $^{106}\text{In}$  and investigation of similar structure in neighbouring odd-odd isotopes**, R. Palit, A.Y. Deo, Z. Naik, **S. Sihotra**, S. Kumar, P. K. Joshi, I. Mazumdar, D. Mehta, and H.C. Jain, Nucl Phys A **834**, 81 (2010).
7. **Excited states in  $^{99}\text{Pd}$ ,** **S. Sihotra**, Z. Naik, S. Kumar, K. Singh, J. Goswamy, R. Kumar, R.P. Singh, S. Muralithar, N. Singh, R. Palit, and D. Mehta, Physical Review C **83**, 024313 (2011).
8. **Structural change of the unique-parity  $\pi h_{11/2} \otimes \nu h_{11/2}$  configuration in  $^{134}\text{Cs}$ ,** H. Pai, G. Mukherjee, A. Raghav, R. Palit, C. Bhattacharya, S. Chanda, T. Bhattacharjee, S. Bhattacharyya, S. K. Basu, A. Goswami, P. K. Joshi, B. S. Naidu, Sushil K. Sharma, A. Y. Deo, Z. Naik, R. K. Bhowmik, S. Muralithar, R. P. Singh, S. Kumar, **S. Sihotra**, and D. Mehta, Physical Review C 84, 041301(R) (2011).
9. **Small quadrupole deformation for the dipole bands in  $^{112}\text{In}$ ,** T. Trivedi, R. Palit, J. Sethi, S. Saha, S. Kumar, Z. Naik, V. V. Parkar, B. S. Naidu, A. Y. Deo, A. Raghav, P. K. Joshi, H. C. Jain, **S. Sihotra**, D. Mehta, A. K. Jain, D. Choudhury, D. Negi, S. Roy, S. Chattopadhyay, A. K. Singh, P. Singh, D. C. Biswas, R. K. Bhowmik, S. Muralithar, R. P. Singh, R. Kumar, and K. Rani, Physical Review C 85, 014327 (2012).
10. **Structure of dipole bands in  $^{112}\text{In}$ : Through Lifetime Measurement,** T. Trivedi, R. Palit, J. Sethi, S. Saha, S. Kumar, Z. Naik, V. V. Parkar, B. S. Naidu, A. Y. Deo, A. Raghav, P. K. Joshi, H. C. Jain, **S. Sihotra**, D. Mehta, A. K. Jain, D. Choudhury, D. Negi, S. Roy, S. Chattopadhyay, A. K. Singh, P. Singh, D. C. Biswas, R. K. Bhowmik, S. Muralithar, R. P. Singh, R. Kumar, and K. Rani, Journal of Physics: Conference Series 381, 012061 (2012).

11. **New spectroscopic informations in  $^{98,99}\text{Rh}$  nuclei**, S. Kumar, **S. Sihotra**, K. Singh, V. Singh, J. Goswami, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, S. K. Ghorui, C. R. Praharaj and D. Mehta, AIP Conf. Proc. 1524, 127-131 (2013); doi: 10.1063/1.4801694.
12. **Structure of degenerate dipole bands in  $^{108}\text{Ag}$** , J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, S. Sihotra, P.M. Walker :Physics Letters B, Volume 725, Issue 1-3, p. 85-91(2013).
13. **Band structures in doubly odd  $^{98}\text{Rh}$** , S. Kumar, **S. Sihotra**, K. Singh, V. Singh, Sandeep, J. Goswamy, N. Singh, D. Mehta, S. S. Malik, R. Palit, R. Kumar, R. P. Singh, S. Muralithar, and R. K. Bhowmik, Physical Review C 89, 034303 (2014).
14. **Study of the level Structure of  $^{108}\text{Ag}$** , J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, **S. Sihotra**, P. M. Walker : EPJ web of Conferences 66, 02097(2014).
15. **Nuclear structure studies close to  $N = Z = 50$**  Kumar, S.; **Sihotra, S.**; Naik, Z.; Singh, K.; Goswami, J.; Singh, N.; Palit, R.; Muralithar, S.; Kumar, R.; Singh, R. P.; Bhowmik, R. K.; Mehta, D. AIP, Volume 1609, Issue 1, p.142-150 (2014)
16. **Band structures in doubly odd  $^{99}\text{Rh}$** , S. Kumar, V. Singh, K. Singh, **S. Sihotra**, J. Goswamy, N. Singh, S. S. Malik, I. Rangnarson, T. Trevedi, R. Palit, R. Kumar, R. P. Singh, S. Muralithar, and R. K. Bhowmik , A. Bharti, D. Mehta, J. Phys. G: Nucl. Part. Phys. 41 (2014) 105110 (27pp) :doi:10.1088/0954-3899/41/10/105110
17. **SPECTROSCOPY OF THE LOW-LYING STATES NEAR THE HIGH SPIN ISOMER IN  $^{108}\text{Ag}$** : J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, **S. Sihotra**, P. M. Walker : ACTAPHYSICAPOLONICA B, Vol. 46, 703 (2015).
18. **Low-lying states near the  $I^\pi = 6^+$  isomer in  $^{108}\text{Ag}$** ; Jasmine Sethi, R Palit, J.J. Carroll, S. Karamian, S. Saha, S. Biswas, Z. Naik, Tarkeshwar Trivedi, M.S. Litz, P. Datta, S. Chattopadhyay, R. Donthi, Umesh Garg, S. Jadhav, H.C. Jain, S. Kumar, Devinder Mehta, B.S. Naidu, G.H. Bhat, J.A. Sheikh, **S. Sihotra**, Philip Walker J. Phys. G: Nucl. Part. Phys. 43(2016) 015103 .
19. **Structure of dipoles bands in  $^{102}\text{Ag}$** ; V. Singh, **S.Sihotra**, S. S. Malik. G.H. Bhat, J.A. Sheikh, **R. Palit**, J. A. Sheikh, S. Kumar, N. Singh, K. Singh, J. Goswamy, J. Sethi, S. Saha, T. Trivedi, and D. Mehta Physical Review C **94**, 044320 (2016).
20. **Longitudinal Wobbling in  $^{133}\text{La}$**  ; S. Biswas, R. Palit, U. Garg, G. H. Bhat, S. Frauendorf, W. Li, J. A. Sheikh, J. Sethi, S. Saha, Purnima Singh, D. Choudhury, J. T. Matta, A. D. yangeakaa, W. A. Dar, V. Singh, **S. Sihotra**. <http://arxiv.org/abs/1608.07840v1>.

21. **Investigation of Antimagnetic rotation in  $^{101}\text{Pd}$** ; V Singh, **S Sihotra** , S Roy, M Kaur, S Saha, J Sethi, R Palit, N Singh, S S Malik, H C Jain and D Mehta, **J. Phys. G: Nucl. Part. Phys.** **44** (2017) 075105 (15pp).
22. Band Structures in  $^{101}\text{Pd}$ ; V. Singh, S. Sihotra, G. H. Bhat, J. A. Sheikh, M. Kaur, S. Kumar, K. Singh, J. Goswamy, S. Saha, J. Sethi, R. Palit, S. S. Malik, N. Singh, U. Garg, and D. Mehta, Phys. Rev. C 95, 064312, 2017
23. **High-spin states in  $^{133}\text{Cs}$  and the shell model description**; S. Biswas, R. Palit, J. Sethi, S. Saha, A. Raghav, U. Garg, Md. S. R. Laskar, F. S. Babra, Z. Naik, S. Sharma, A. Y. Deo, V. V. Parkar, B. S. Naidu, R. Donthi, S. Jadhav, H. C. Jain, P. K. Joshi, **S. Sihotra**, S. Kumar, D. Mehta, G. Mukherjee, A. Goswami, and P. C. Srivastava, Phys. Rev. C 95, 064320 (2017).
24. **Shell-model Description in  $^{99}\text{Rh}$  and Systematics of Odd-A Rh Isotopes**: S Kumar, **S Sihotra**, V Singh, J Rather, M Kaur, J Goswamy, N Singh, D Mehta, T Trivedi, RP Singh, S Muralithar, R Palit; Acta Physica Polonica B, 2019 DOI:10.5506/APhysPolB.50.159
25. **Longitudinal wobbling in  $^{133}\text{La}$** ; S Biswas, R Palit, S Frauendorf, U Garg, W Li, GH Bhat, JA Sheikh, J Sethi, S Saha, Purnima Singh, D Choudhury, JT Matta, AD Ayangeakaa, WA Dar, V Singh, **S Sihotra**; European Physical Journal A 55 (9), 159 ,2019.
26. **Evidence of Antimagnetic rotation in  $^{100}\text{Pd}$** ; V Singh, **S Sihotra** , S Roy, M Kaur, S Saha, J Sethi, R Palit, N Singh, S S Malik, H C Jain and D Mehta, **Phys. Rev. C** **102**, 034321 (2020).

### **Publications in National-Journals/International Conferences/Symposium:**

1. *Rotational structures in  $^{125}\text{Cs}$* , K.Singh, **S. Sihotra**, R. Kumar, J. Goswamy, D. Mehta, N. Singh, S.S. Malik, R.P. Singh, S. Muralithar, and R.K. Bhowmik Proc. DAE Symposium Nucl. Phys. 50, 254(2005).
2. *Band structures in  $^{131}\text{Cs}$* , **S. Sihotra**, K. Singh, Rajesh Kumar, J. Goswamy, D. Mehta, N. Singh, R.Palit, H.C. Jain, P.K. Joshi, and S.S. Malik, Proc. DAE Symposium Nucl. Phys. 51, 228 (2006).
3. *High spin states in  $^{106}\text{In}$* , A.Y. Deo, R. Palit, **S. Sihotra**, Z. Naik, S. Kumar, P.K. Joshi, I. Mazumdar, H.C. Jain, Kausik Basu, R. Kshetri, and R. Chakrabarti, Proc. DAE Symposium Nucl. Phys. 52, 193 (2007).
4. *Microscopic explanation of observed band structures of  $^{131}\text{Cs}$* , Z. Naik, R. Palit, **S. Sihotra**, A.Y. Deo, D. Mehta, and C.R. Praharaj, Proc. DAE Symposium Nucl. Phys. 52, 199 (2007).
5. *High spin states in  $^{129}\text{Cs}$* , **S. Sihotra**, K. Singh, J. Goswamy, D. Mehta, N. Singh, S.S. Malik, R. Palit, R. Kumar, S. Muralithar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 52, 228 (2007).
6. *Structures of Dipole Bands of  $^{107}\text{In}$* , **S. Sihotra**, Z. Naik, R.Palit, A.Y. Deo, S. Kumar, P.K. Joshi, D. Mehta, and N. Singh, Proc. DAE Symposium Nucl. Phys. 53, 235 (2008).

7. *Multiple band structures of  $^{131,133}\text{Cs}$  isotopes*, R. Palit, **S. Sihotra**, A. Raghav, Z. Naik, K. Singh, A.Y. Deo, P.K. Joshi, J. Goswamy, S.S. Malik, D. Mehta, H.C. Jain, N. Singh, and C.R. Prahraj, Proc. CNS-RIKEN Joint International Symposium (gamma08) (2008).
8. *Band structures in  $^{129}\text{Cs}$* , **S. Sihotra**, K. Singh, J. Goswamy, S.S. Malik, D. Mehta, N. Singh, R.Palit, R. Kumar, S. Muralithar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 53, 347 (2008).
9. *High Spin Excitation in  $^{99}\text{Pd}$* , **S. Sihotra**, J. Goswamy, Z. Naik, R.Palit, S.S. Malik, D. Mehta, N. Singh, S. Muralithar, R. Kumar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 53, 351 (2008).
10. *Investigation of positive parity Degenerate Dipole Bands  $^{133}\text{Ce}$* , R. Palit, V.V. Parker, Z. Naik, H.C. Jain, P.K. Joshi, I. Mazumdar, A.Y. Deo, **S. Sihotra, et al.** ;Proc. DAE Symposium Nucl. Phys. 53, 323 (2008).
11. *Quadrupole and Octupole collectivity in  $^{99}\text{Pd}$* , **S. Sihotra**, Z. Naik, J. Goswamy, R. Palit, D. Mehta, N. Singh, S. Muralithar, R. Kumar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 54, 64 (2009).
12. *High spin structure of  $^{133}\text{Cs}$* , A. Raghav, R. Palit, Z. Naik, A.Y. Deo, V.V. Parker, B.S. Naidu, H.C. Jain, P.K. Joshi, **S. Sihotra**, S. Kumar, D. Mehta, G. Mukherjee, and A. Goswami, Proc. DAE Symposium Nucl. Phys. 54, 86 (2009).
13. *High spin spectroscopy of  $^{134}\text{Cs}$* , H. Pai, G. Mukherjee, S. Bhattacharyya, T. Bhattacharjee, R. Palit, A.Y. Deo, P.K. Joshi, B.S. Naidu, S. Sharma, A. Raghav, Z. Naik, A. Goswami, S. Kumar, **S. Sihotra**, D. Mehta, S.K. Basu, and S. Chanda, Proc. DAE Symposium Nucl. Phys. 54, 88 (2009).
14. Nuclear Structure studies in A~100 and A~130 mass regions; **S. Sihotra** , DAE Symposium Proceedings in Nuclear Physics (2009), Mumbai.
15. *Hartree-Fock microscopic description of band structures in  $^{99}\text{Pd}$* ; Z. Naik, **S. Sihotra**, J. Goswamy, Proc. DAE Symposium Nucl. Phys.55, 22 (2010).
16. *Excited States in  $^{98}\text{Rh}$* ; Surender Kumar, **S. Sihotra**, and K. Singh et al., Proc. DAE Symposium Nucl. Phys.55, 44 (2010).
17. *Excited States in  $^{99}\text{Rh}$* ; **S. Sihotra**, Surender Kumar, and K. Singh et al., Proc. DAE Symposium Nucl. Phys. 55, 46 (2010).
18. Excited states in  $^{99}\text{Pd}$ , S. Sihotra, Z. Naik, **S. Kumar**, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, CHASCON (2010) Panjab University Chandigarh.
19. *Band Structures in  $^{96}\text{Ru}$* ; Jaspreet Kaur, **S. Sihotra** , S. Kumar, K. Singh , J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. DAE Symposium Nucl. Phys. 56, 434 (2011)

20. *Band Structures in  $^{98,99}\text{Rh}$  Nuclei*, S. Kumar, **S. Sihotra**, K. Singh, J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. DAE Symposium Nucl. Phys. 56, 424 (2011)
21. *Implementation of Digital Constant Fraction Discrimination for fast Scintillators*; S. Saha, R. Palit, J. Sethi, T. Trivedi, S. N. Mishra, B.S. Naidu, S. Jadhav R. Donthi, S. M. Davane, S. Kumar, S. Mandal, **S. Sihotra**, and D.Mehta, Proc. DAE Symposium Nucl. Phys. 56, 1142 (2011)
22. *Small axially symmetric deformation for dipole bands in  $^{112}\text{In}$* ; T. Trivedi, R. Palit, J. Sethi, S. Saha, S. N. Mishra, B.S. Naidu, S. Jadhav, R. Donthi, S. M. Davane, S. Kumar, **S. Sihotra**, and D.Mehta, Proc. DAE Symposium Nucl. Phys. 56, 226 (2011).
23. Maximally spin aligned states in  $^{96}\text{Ru}$ ; **S. Sihotra**, Jaspreet Kaur, S. Kumar, K. Singh, J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. , CHASCON (2011) Panjab University Chandigarh.
24. High spin states in  $^{98,99}\text{Rh}$ , S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, CHASCON (2012) Panjab University Chandigarh.
25. **Band Structure in  $^{96}\text{Tc}$** , V. Pal Singh, S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 57, 358 (2012).
26. **Nuclear structure studies close to  $Z \approx N \approx 50$** , S. Kumar, V. Pal Singh, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, DAE Symposium Proceedings in Nuclear Physics 57, 192, (2012), Delhi University.
27. **Nuclear structure studies close to  $N = Z = 50$** , S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, R. Palit, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, R. Bhowmik, and D. Mehta, [www.iuac.res.in/FIG12/full-papers/fig12\\_Final\\_S.Sihotra.pdf](http://www.iuac.res.in/FIG12/full-papers/fig12_Final_S.Sihotra.pdf).
28. **Structure of  $^{108}\text{Ag}$  at Low and Medium Spin** ; J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, **S. Sihotra**, P.M. Walker, DAE Symposium Proceedings in Nuclear Physics 57, 288 (2012), Delhi University.
29. **Nuclear Structure studies in  $A \sim 100$  and  $A \sim 130$  mass regions**; **S.Sihotra**, DAE Symposium Proceedings in Nuclear Physics 57, 94 (2012), Delhi University.
30. **Band Structure in  $^{96}\text{Tc}$** , V. Pal Singh, **S. Sihotra**, S. Kumar, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, Proceedings of the CHASCON (2013) Panjab University Chandigarh.
31. **Nuclear structure studies close to  $Z \approx N \approx 50$** , S. Kumar, **S. Sihotra**, V. Pal Singh, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, Proceedings of the CHASCON (2013) Panjab University, Chandigarh.

- 32. Lifetime measurements in  $^{101}\text{Pd}$ , S. Sihotra, V. Singh, S. Kumar, J. Goswamy, N. Singh, S. Saha, J. Sethi, T. Trivedi, R. Palit, H. C. Jain, and D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 58, 234 (2013).**
- 33. Level Structures in  $^{102}\text{Ag}$ , V. Singh, S. Sihotra, S. Kumar, K. Singh, J. Goswamy, N. Singh, S. Saha, J. Sethi, T. Trivedi, R. Palit, D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 58, 238 (2013).**
- 34. Excited States in  $^{96}\text{Tc}$ , V. Singh, S. Sihotra, S. Kumar, K. Singh, J. Goswamy, N. Singh, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik and D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 58, 242 (2013).**
- 35. Band Structures in  $^{99}\text{Rh}$ , S. Kumar, S. Sihotra, V. Singh, J. Goswamy, K. Singh, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, S. S. Malik, T. Trivedi, I. Ragnarsson, and D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 58, 294 (2013).**
- 36. Excited States in doubly-Odd  $^{98}\text{Rh}$ , S. Kumar, S. Sihotra, K. Singh, V. Singh, J. Goswamy, N. Singh, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, S. S. Malik, R. Palit, and D. Mehta, Proceedings of the DAE Symp. Nucl. Phys. 58, 298 (2013).**
- 37. Band Structures in  $^{99}\text{Rh}$ , S. Kumar, S. Sihotra, V. Singh, J. Goswamy, K. Singh, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, S. S. Malik, T. Trivedi, I. Ragnarsson, and D. Mehta, Proceedings of the CHASCON (2014) Panjab University, Chandigarh.**
- 38. Lifetime measurements in  $^{101}\text{Pd}$ , S. Sihotra, V. Singh, S. Kumar, J. Goswamy, N. Singh, S. Saha, J. Sethi, T. Trivedi, R. Palit, H. C. Jain, and D. Mehta, Proceedings of the CHASCON (2014) Panjab University, Chandigarh.**
- 39. Excited States in  $^{96}\text{Tc}$ , V. Singh, S. Sihotra, S. Kumar, K. Singh, J. Goswamy, N. Singh, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik and D. Mehta, Proceedings of the CHASCON (2014) Panjab University, Chandigarh.**
- 40. Antimagnetic Rotation in  $^{101}\text{Pd}$ , V. Singh, S. Sihotra, S. Kumar, J. Goswamy, N. Singh, S. Saha, J. Sethi, T. Trivedi, R. Palit, H. C. Jain, and D. Mehta, Proc. DAE Symp. on Nucl. Phys. 59, 224 (2014). (ISBN:818372076-5)**
- 41. Chiral Structures in doubly odd nucleus  $^{102}\text{Ag}$ , V. Singh, S. Sihotra, G.H. Bhat, S. Kumar, K. Singh, N. Singh, J. Goswamy, J. Sethi, S. Saha, R. Palit, J.A. Sheikh, and D. Mehta, Proc. DAE Symp. on Nucl. Phys. 59, 226 (2014). (ISBN: 818372076-5)**
- 42. Multi particle excitations in  $^{102}\text{Cd}$ , V. Singh, S. Sihotra, S. Kumar, Sandeep, N. Singh, J. Goswamy, S. Saha, J. Sethi, R. Palit, and D. Mehta, Proc. DAE Symp. on Nucl. Phys. 59, 228 (2014). (ISBN: 818372076-5)**
- 43. Shell model calculations in  $^{99}\text{Rh}$ , S. Kumar, S. Sihotra, T. Trivedi, V. Singh, K. Singh, J. Goswamy, N. Singh, R. P. Singh, S. Muralithar, R. Kumar, R. K. Bhowmik, and D. Mehta, Proc. DAE Symp. on Nucl. Phys. 59, 98 (2014). (ISBN: 818372076-5)**
- 44. Multi particle excitations in  $^{102}\text{Cd}$ , V. Singh, S. Sihotra, S. Kumar, Sandeep, N. Singh, J. Goswamy, S. Saha, J. Sethi, R. Palit, and D. Mehta, Proceedings of the CHASCON (2015) Panjab University, Chandigarh.**



45. **Excited States in  $^{101}\text{Pd}$** , V. Singh, **S. Sihotra**, J. Goswamy, N. Singh, S. Saha, J. Sethi, R. Palit, Z. Naik, and D. Mehta, Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 60, 180 (2015).
46. **Low -lying states near  $I^\pi= 5$  Ground State in  $^{102}\text{Ag}$** , V. Singh, **S. Sihotra**, S. Kumar, K. Singh, N. Singh, J. Goswamy, J. Sethi, S. Saha, R. Palit, G.H. Bhat, J.A. Sheikh, and D. Mehta, Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 60, 218 (2015).
47. **Excited States in  $^{100}\text{Pd}$** ; M. Kaur, **S. Sihotra**, V. Singh, N. Singh, J. Sethi, S. Saha, S. Roy, R. Palit, D. Mehta, Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 61, 150 (2016).
48. **Structure of degenerate bands in  $^{120}\text{I}$** , S. Sihotra, M. Kaur, V. Singh, S. Kumar, N. Singh, N. Kaur, J. Goswamy, J. Sethi, S. Saha, S. Biswas, R. Palit, R. Kumar, R. P. Singh, S. Muralithar, Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 61, 152 (2016).
49. **In beam Gamma spectroscopy:** Mayank, S. Muralithar, S. Sihotra, S. Kumar, D.Mehta, R.P. Singh, Urvashi Rathor' <http://adsabs.harvard.edu/abs/2016APS..DNP.EA100M>.
50. **Rotational Band Structure in  $^{101}\text{Pd}$** ; J Rather, J Sheikh, G Bhat, D Mehta, V Singh, S. Sihotra, DAE Symp. Nucl. Phys. 62, 226-227 (2017)
51. **Band Structures in  $^{100}\text{Pd}$** : M Kaur, S Muralithar, N Singh, D Mehta, V Singh, S Sihotra, J Rather, RP Singh, R Palit; DAE Symp. Nucl. Phys. 62, 92-93 (2017).
52. **Chirality symmetry breaking in triaxial nuclei;** GH Bhat, JA Sheikh, S Sihotra, V Singh, M Kaur, J Rather, D Mehta
53. **Band Structures in  $^{120}\text{I}$** : M Kaur, J Goswamy, N Kaur, N Singh, V Singh, S Sihotra, J Rather, S Kumar et al.,DAE Symp. Nucl. Phys. 63, 120-121(2018).

## Invited Talks;

- ✚ Invited Talk on Nuclear Structure studies in A ~100 Mass regions in International workshop at TIFR, 2011.
- ✚ Invited Talk on Nuclear Structure studies in A~100 and A~130 Mass regions in DAE Nuclear Physics Symposium (2012)
- ✚ Invited Talk on Nuclear Structure studies in Mass 100 in International conference India-UK meet in Nuclear Physics at ISOLDE in PU, Chandigarh (2014).
- ✚ Invited talk on Nuclear structure studies in N=Z=50 Shell closure in National Conference on Emerging trends and Many body interaction at Jammu University, Jammu (2014).
- ✚ Invited talk on Fast timing measurements on National School cum Workshop in Accelerator Physics, PU, Chandigarh, March 15-18(2016).
- ✚ Invited talk on Nuclear structure studies in N=Z=50 Shell closure in INCP, PU, Chandigarh, March 15-18(2017).
- ✚ Invited Talk on Nuclear Structure studies in A ~100 Mass regions in International workshop at TIFR, 2018.

