BIODATA

A. Name	**MEHTA DEVINDER**
B. Position held	Professor of Physics
C. Address	Department of Physics, Panjab University Chandigarh-160014, INDIA.
	Ph. : +91-172-534489 (O)
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D. Date of Birth	27th November, 1963
E. Place of Birth	Hoshiarpur, Punjab
F. Nationality	Indian

G. Specialization	(i) Experimental Nuclear Physics
	(ii) Photon-atom interactions in X-ray energy region

H. Educational qualification

Degree	University	Year	Div.	Merit
Matric	Pb.S.E.B	1977	Ist	
Pre-Engg.	Punjabi	1979	Ist	
B.Sc.	Panjab	1981	Ist	7th merit position in Univ.
B.Sc. (Maths Hons)	Panjab	1981	Ist	Ist position in Univ. (Univ. medal)
M.Sc.(Physics) (Electronics specialization)	Panjab	1983	Ist	IInd merit position in Univ.
Ph.D. (Experimental Nuclear Physics)	Panjab	1988		Thesis Entitled: "Nuclear Spectroscopic Studies in certain Nuclei"

(a) Qualified the National Educational Test for research fellowships held by (i) CSIR (1983) and (ii) UGC (1984) and GATE (1983) with percentile score of 97.43.

(b) Recipient of National Scholarship during the Course of M.Sc, Panjab University (1981-1983).

I. Positions held

Post held	Name of Employer	Period	Nature of duties
Professor	Department of Physics Panjab University Chandigarh	Since Oct. 2007	Research & Teaching
Reader	Department of Physics Panjab University	Oct. 1999- Sept. 2007	Research & Teaching
Lecturer	Department of Physics and Astrophysics University of Delhi	Aug. 1993 - Sept. 1999	Research & Teaching
Lecturer	Physics Department H.P. University, Shimla	Oct. 1992 - July 1993	Research & Teaching
Humboldt Fellow	Institut fur Strahlen u. Kern Physik, Bonn University, Germany	Nov. 1989 - April 1991	Research
Pool-Officer (CSIR)	Physics Department Panjab University	Nov. 1988 - Oct. 1989 May 1991 - Sept. 1992	Research & Teaching
Research Associate (DAE)	Physics Department Panjab University	Oct. 1986 - March 1987 May 1991 - July 1991	Research
Research Fellow (CSIR)	Physics Department Panjab University	Sept. 1983 - Sept. 1988	Research

J. Innovations in methodology/evaluation/teaching material and aids/curriculum

Actively involved in preparing the drafting the curricula for the new courses B.Sc and M.Sc (Hons. School) in Physics & Electronics, Post Graduate 1 year Diploma in Accelerator Physics, and M.Sc (Two-year Course) in Physics. Apart from it actively participated in the curricula for M.Sc and B.Sc (Hons. School) in Physics, have been upgraded and new special papers have been introduced. Have been instrumental in introducing many experiments at the undergraduate (UG) and postgraduate (PG) practical classes. Actively participated in running the project work at post graduate level.

Subjects taught : Semiconductor devices and analogue electronics (PG)
Digital Signal Processing (PG)
Digital Electronics (PG)
Communication (UG)
Electrodynamics (PG)
Nuclear Physics (PG)
Experimental techniques in Nuclear Physics (PG)

K. Research work:

Research work has been pursued mainly in the fields of Experimental Nuclear Spectroscopy and X-ray Spectroscopy since 1983. After completing Ph.D. degree in the field of nuclear spectroscopy using the radioactive decays and Coulomb excitation, I got the opportunity to work at various European Accelerator Laboratories during the tenure of Humboldt fellowship. Nuclear structure investigations were carried out using heavy ion fusion-evaporation reactions and gamma ray spectroscopy techniques. I have contributed significantly to start and establish the research work in high spin nuclear spectroscopy on firm footing at Physics Department, Panjab University and boosting the activity of research group at University of Delhi. I have been actively involved in setting up of new facilities like multidetector arrays of Compton-suppressed Ge detectors, mini-orange electron spectrometer, EDXRF set ups based on radioactive source and X-ray tube exciters and establishing the necessary computer programs for Data analysis at different laboratories. From the nuclear spectroscopy studies, interesting results like discovery of superdeformation in ^{194}Pb, oblate collective bands in ^{199,200}Pb, Chiral bands in ^{125,131}Cs nuclei, non-collective oblate states in ^{116,118,119,121}Te and doubly odd ^{118,120,122}I nuclei have been obtained from these experiments. The high spin states in odd-odd ^{162,164,168,170}Lu have been investigated for the first time.

The photon-atom interaction studies include investigations of different phenomenon following the inner-shell vacancy production, Rayleigh scattering, Compton scattering and resonant Raman scattering. It involved measurements of X-ray fluorescence cross-sections, fluorescence yields and vacancy transfer probabilities and scattering cross sections done using energy-dispersive spectrometers and radioactive sources/X-ray tubes as photon sources. Comprehensive compilation of K and L XRF cross sections and

average L and M shell fluorescence yields were published in J. Phys. Chem. Ref. Data and Atomic and Nuclear Data Tables. New measurements on resonant Raman scattering in the x ray energy region have been performed. It is established for the first time that the L_2 subshell radiative and the L_2-L_3 Coster-Kronig yields, and ratio of the L_2-M_4 and L_2-N_4 radiative RRS intensities in the La compounds are found to be same, and are consistent with the values from the photoexcited vacancy decay. The M and L_3 subshell fluorescence emission and L_i subshell radiative Resonant Raman Scattering was also observed to be isotropic. New geometrical set ups involving various radioisotopes and X-ray tube based exciter systems for EDXRF measurements have been developed for different kind of measurements. The ED/WDXRF facilities with elemental analysis capabilities have been extensively used for the interrelated science research and industrial purposes.

Research publications in International/National Journals : 134

Research papers presented in Conferences/Symposia : 70

The research papers have been widely cited ~ 400. Some of the publications based on data compilations have citations more than 50.

L. Number of M.Phil and Ph.D. dissertations –

(a)	Number of Ph.D. thesis supervised	: 11
	Number students who have submitted the Ph.D. thesis	: 02
(b)	Number of Ph.D. thesis under supervision	: 05
(c)	Number of M.Phil. thesis supervised	: 05
(d)	Number of M.Sc projects supervised	: 20

M. I have been co-investigator and worked actively in implementation of the following projects:

(a) Study of High Spin states in A~130 mass region using GDA and Electron Spectrometer, funded by UGC, 1999-2003.

(b) Investigation of photon-atom scattering processes in the X-ray energy region and analytical applications funded by DST, 2002-2007.

(c) To investigate photon-atom interactions close to binding energies using monochromatic photon source and X-ray tube along with monochromator. This project has been funded by DST, New Delhi under FIST Grants 2003-2008.

(d) Investigation of triaxiality in nuclei around Z=50. This project has been funded by UFUP, UGS-NSC in the year 2004. The experiments to study triaxiality in mass A~ 100 & 130 regions will be performed in near future using INGA set up along with 15UD pelletron-LINAC accelerator facility.

(e) Study of Particle-induced Inner-shell Ionisation Cross sections and its applications to PIXE Technique, funded by UGC, 2008-2011.

(f) To establish microfocus X-ray source for EDXRF set up. This project has been funded by DST, New Delhi under FIST grants in the year 2009.

(g) Active participation in the proposal for the Panjab University accelerator Centre involving 6 MV Tandem Accelerator by Department of Science & Technology (DST), Govt of India. The project has been technically approved.

(h) Investigation of uranium mobilization from subsurface sediments by effect of bicarbonate and other ions in groundwater of Malwa Region of Punjab state in India – UGC-DAE consortium (2014-2017)

N. Referee for many research papers for the International/national Journals:

(i) European Journal of Physics D

(ii) Nuclear Instruments and methods B

(iii) Pramana

(iv) Indian Journal of Applied Physics

(v) Journal of Radioanalytical and Nuclear Chemistry

A Book on Experimental Nuclear Physics by J.C. Verma, published by Narosa, New Delhi has been reviewed.

O. Membership of learned societies:

Life member, Indian Physics association (IPA)

Indian Society for Particle Accelerators (ISPA)

P. LIST OF PUBLICATIONS IN JOURNALS

(a) During Ph.D. (1983-1988):

1. GAMMA-GAMMA DIRECTIONAL CORRELATIONS IN ^{160}Dy. *Jasbir Singh, M. L. Garg, D. Mehta, N. Singh and P.N. Trehan.* J. Phys. Soc. of Japan 53 (1984) 2485.
2. X-RAY AND GAMMA-RAY INTENSITY MEASUREMENTS IN ^{141}Ce AND ^{170}Tm DECAYS. *D. Mehta, H. Kaur, M.L. Garg, H.R. Verma, N. Singh, T.S. Cheema and P.N. Trehan.* Nucl. Instrum. and Meth. A 242 (1985) 149.
3. ENERGY DEPENDENCE OF PHOTON-INDUCED K AND L X-RAY FLUORESCENCE CROSS SECTIONS FOR SOME ELEMENTS WITH $20 \leq Z \leq 56$. *M.L. Garg, D. Mehta, S. Kumar, H.R. Verma, P.C. Mangal and P.N. Trehan.* X-ray Spectrometery 14 (1985) 165.
4. MEASUREMENT OF PHOTON-INDUCED L X-RAY FLUORESCENCE CROSS-SECTIONS FOR Ta, W, Au, Tl AND Bi IN THE 15-60 keV ENERGY REGION. *M.L.Garg, S. Kumar, D. Mehta, H.R.Verma, P.C.Mangal and P.N. Trehan* J. Phys. B : At. Mol. Phys. 18 (1985) 4529.
5. PRECISION MEASUREMENTS OF X-RAY AND GAMMA-RAY INTENSITIES IN ^{192}Ir, ^{160}Tb, ^{161}Yb AND ^{152}Eu DECAYS. *D. Mehta, M.L. Garg, J. Singh, N. Singh, T.S. Cheema and P.N. Trehan.* Nucl. Instrum. and Meth. 245 (1986) 447.
6. MEASUREMENT OF L X-RAY FLUORESCENCE CROSS-SECTIONS AND RELATIVE INTENSITIES FOR Ho, Er AND Yb IN THE ENERGY RANGE 11-41 keV. *M.L.Garg, D. Mehta, H.R.Verma, N.Singh, P.C.Mangal and P.N. Trehan.* J. Phys. B. 19 (1986) 1615.
7. MEASUREMENTS OF PHOTON-INDUCED L X-RAY FLUORESCENCE CROSS-SECTIONS AND RELATIVE INTENSITIES FOR Ba, Ce AND Nd AT 15.2, 17.8, 22.6 AND 25.8 keV. *Surinder Singh, M.L.Garg, D. Mehta, H.R.Verma, N. Singh, P.C.Mangal and P.N. Trehan.* Nucl. Instrum. and Meth. A 254 (1987) 578.
8. X-RAY AND GAMMA-RAY INTENSITY MEASUREMENTS IN ^{137}Cs AND ^{203}Hg DECAYS. *D. Mehta, S. Singh, H.R. Verma, N. Singh and P.N. Trehan.* Nucl. Instrum and Meth. A 254 (1987) 578.
9. X-RAY AND GAMMA-RAY INTENSITY MEASUREMENTS IN ^{210}Pb, ^{177}Lu, ^{170}Tm AND ^{141}Ce DECAYS. *D. Mehta, B. Chand, S. Singh, M.L. Garg, N. Singh, T.S. Cheema and P.N. Trehan.* Nucl. Instrum. and Meth. A 260 (1987) 157.
10. COULOMB EXCIATAION OF RUTHENIUM ISOTOPES. *B.K. Arora, D. Mehta, R. Rani, T.S. Cheema and P.N. Trehan.* Nucl. Instrum. and Meth. B 24/25 (1987) 460.
11. COULOMB EXCIATAION STUDIES IN ^{127}I. *T.S. Cheema, D. Mehta, B.K. Arora and P.N. Trehan.* Nucl. Instrum. and Meth. B 24/25 (1987) 460.
12. MEASUREMENT OF PHOTON-INDUCED L X-RAY FLUORESCENCE CROSS-SECTIONS AND RELATIVE INTENSITIES FOR Tm, Lu, Th AND U IN THE ENERGY RANGE 15-60 keV. *S. Singh, D. Mehta, M.L. Garg, S. Kumar, N. Singh, P.C. Mangal and P.N. Trehan.* J. Phys. B: At. Mol. Phys. 20 (1987) 3325.
13. MEASUREMENTS OF PHOTON-INDUCED L X-RAY FLUORESCENCE CROSS-SECTIONS AND RELATIVE INTENSITIES FOR ELEMENTS $56 \leq Z \leq 66$ IN THE ENERGY RANGE 11-41 keV. *S. Singh, D. Mehta, M.L. Garg, S. Kumar, N. Singh, P.C. Mangal and P.N. Trehan.* J. Phys. B: At. Mol. Phys. 20 (1987) 5345.
14. MEASUREMENTS OF K X-RAY FLUORESCENCE CROSS-SECTIONS FOR SOME ELEMENTS WITH $23 \leq Z \leq 55$ IN THE ENERGY RANGE 8-60 keV. *S. Kumar, S. Singh, D. Mehta, N. Singh, P.C. Mangal and P.N. Trehan.* X-ray Spectrometery 16 (1987) 20.
15. STUDY OF RADIO-ACTIVE DECAY OF ^{192}Ir. *D. Mehta, S. Singh, M.L. Garg, N. Singh, T.S. Cheema and P.N. Trehan.* Z. Phys. A Atomic Nuclei, 328 (1987) 31.
16. PRECISION MEASUREMENTS OF K X-RAY AND GAMMA RAY INTENSITIES IN ^{103}Ru, ^{131}Ba, ^{134}Cs AND ^{166M}Ho DECAYS. *B. Chand, J. Goswamy, D. Mehta, S. Singh, N. Singh and P.N. Trehan.* Nucl. Instrum. and Meth. A 273 (1988) 860.

17. BIO-KINETICS OF LEAD IN VARIOUS MOUSE ORGANS/ TISSUES USING RADIO-TRACER TECHNIQUE. *S. Kumar, D. Mehta, S. Singh, M.L. Garg, P.N. Trehan and P.C. Mangal.* Indian Jol. Of experimental Biology 26 (1988) 860.

(b) During Post-Doctoral Period (1988-1993):

18. L X-RAY FLUORESCENCE CROSS-SECTIONS AND RELATIVE INTENSITIES MEASUREMENTS FOR HF, RE, IR, PT AND PB IN ENERGY RANGE 15-60 keV. *S. Singh, B. Chand, D. Mehta, S. Kumar, M.L. Garg, N. Singh, P.C. Mangal and P.N.Trehan*, J.Phys. B : At. Mol. Phys. 22 (1989) 1163.

19. CONTRIBUTION DUE TO EXCITATION BY SCATTERED PHOTONS IN MEASUREMENTS OF L XRF CROSS-SECTIONS. *S. Singh, D. Mehta, S. Kumar, M.L. Garg, N. Singh, P.C. Mangal and P.N. Trehan.* X-ray Spectrometery 18 (1989) 143.

20. MATRIX CORRECTIONS FOR QUANTITATIVE ESTIMATION OF TRACE ELEMENTS IN BIOLOGICAL SAMPLES USING EDXRF. *S. Kumar, S. Singh, D. Mehta, M.L. Garg, P.C. Mangal and P.N. Trehan.* X-ray Spectrometery 18 (1989) 8.

21. ELEMENTAL ANALYSIS OF ENVIRONMENTAL SAMPLES USING ENERGY DISPERSIVE X-RAY FLUORESCENCE TECHNIQUE. *S. Kumar, S. Singh, M.L. Garg, D. Mehta, N. Singh, P.C. Mangal and P.N. Trehan.* Indian Jol. of Environmental Health 31 (1989) 8 .

22. X-RAY AND GAMMA-RAY INTENSITY MEASUREMENTS IN ^{131}I, ^{166}Ho, ^{197}Au AND ^{199}Au-DECAYS.*B. Chand, J. Goswamy, D. Mehta, N. Singh and P.N. Trehan.* Nucl. Instrum. and Meth. A 284 (1989) 393.

23. AVERAGE L-SHELL FLUORESCENCE YIELDS FOR ELEMENTS $56 \leq Z \leq 92$. *S. Singh, D. Mehta, M.L. Garg, R.R. Garg, N. Singh, P.C. Mangal and P.N. Trehan.* Nucl. Instrum. and Meth. B 51 (1990) 5.

24. K X-RAY FLUORESCENCE CROSS-SECTION MEASUREMENTS OF SOME ELEMENTS IN THE ENERGY RANGE 8-47 keV. *S. Singh, R. Rani, D. Mehta, N. singh, P.C. Mangal and P.N. Trehan.* X-ray Spectrometery 19 (1990) 155.

25. SUPERDEFORMATION IN ^{194}Pb. *H. Hubel, K. Theine, D. Mehta, W. Schmitz, P. Willsau, C.X. Yang, F. Hannachi, D.B. Fossan, H. Grawe, H. Kluge and K.H. Maier.* Nucl. Phys. A 285 (1991) 393. Also, in Z. Phys. A 336 (1990) 113.

26. SPECTROSCOPY OF ^{195}Hg AND ^{196}Hg. *D. Mehta, Y.K. Agarwal, K.P. Blume, S. Heppner, H. Hubel, M. Murzel, K. Theine, W. Gast, G. Hebbinghaus, R.M. Lieder and W. Urban.* Z. Phys. A 339 (1991) 317.

27. MEASUREMENT OF M X-RAY PRODUCTION CROSS-SECTIONS FOR SOME ELEMENTS WITH $77 < Z < 90$ USING 5.96 keV PHOTONS. *R.R. Garg, S. Singh, J.S. Shahi, D. Mehta, N. Singh, S. Kumar, M.L. Garg, P.C. Mangal and P.N. Trehan.* X-ray Spectrometry 20 (1991) 91.

27. CONVERSION ELECTRON AND GAMMA-GAMMA DIRECTIONAL CORRELATION MEASUREMENTS IN ^{134}Ba.. *B. Chand, J. Goswamy, D. Mehta, N. Singh and P.N. Trehan.* Can. J. Phys. 68 (1991) 1479.

28. STUDY OF RADIO-ACTIVE DECAYS OF ^{140}Ba AND ^{140}La. B.Chand, J.Goswamy, D.Mehta, N.Singh and P.N. Trehan. Can. J. Phys. 69 (1991) 90.

29. PRECISION MEASUREMENTS OF CONVERSION ELECTRONS IN ^{125}Sb, ^{152}Eu AND ^{160}Tb DECAYS. J.Goswamy, B.Chand, D.Mehta, N.Singh and P.N.Trehan. Int. Jol. of Appl. Rad. and Isot. 42 (1991) 1025.

30. PHOTON EMISSION PROBABILITIES AND DECAY PERCENTAGES IN ^{185}OS AND ^{186}RE DECAYS. *J.Goswamy, B.Chand, D.Mehta, N.Singh and P.N.Trehan.* Int. Jol. of Appl.Rad. and Isot. 42 (1991) 1033.

31. PHYSICAL PARAMETERS FOR L X-RAY PRODUCTION CROSS-SECTIONS. S. Puri, B. Chand, M.L. Garg, N. Singh, J.H. Hubbell and P.N. Trehan. X-ray Spectrometry 21 (1992) 171.

32. EFFECT OF AUTOMOBILE EXHAUST ON THE DISTRIBUTION OF TRACE ELEMENTS AND ITS MODULATION FOLLOWING Fe, Cu AND Zn SUPPLEMENTATION. *S. Kumar, S. Singh, D. Mehta, R.R. Garg, M.L.Garg, N. Singh, P.C. Mangal and P.N.Trehan.* Biological Trace Element Research 31 (1991) 51.

33. MEASUREMENTS OF L X-RAY FLUORESCENCE CROSS-SECTIONS AND FLUORESCENCE YIELDS FOR ELEMENTS IN THE RANGE $41 \leq Z \leq 52$ AT 5.96 keV. R.R.Garg, S.Puri, S.Singh, D.Mehta, M.L.Garg, J.S.Shahi, N. Singh and P.N.Trehan. *Nucl. Instrum. and Methd. B 72 (1992) 147.*

34. EDXRF TECHNIQUE FOR THE ELEMENTAL ANALYSIS OF INDUSTRIAL EFFLUENTS. *Surinder Singh, R.R.Garg, J.S. Shahi, D. Mehta, N. Singh, S. Kumar, M.L. Garg, P.C. Mangal and P.N. Trehan.* Indian Journal of Environmental Health 34 (1992) 33.

35. STUDIES ON THE DECAYS OF ^{153}SM AND ^{153}Gd TO ^{153}Eu. *B.Chand, J.Goswamy, D.Mehta, N.Singh and P.N. Trehan.* Int. Jol. of Appl. Rad. and Isot. 43 (1992) 997.

36. LEVEL STRUCTURE STUDIES OF ^{182}W FROM THE DECAY OF ^{182}Ta. *B.Chand, J.Goswamy, D.Mehta, N.Singh and P.N.Trehan.* Can. J. Phys. 70 (1992) 242.

37. STUDY OF ^{99}MO AND ^{111}AG DECAYS. *J.Goswamy, B.Chand, D.Mehta, N.Singh and P.N. Trehan.* Int. Jol. of Appl. Rad. and Isot. 43 (1992) 1467.

38. STUDY OF THE ^{124}Sb DECAY. *J.Goswamy, B.Chand, D.Mehta, N.Singh and P.N.Trehan.* Int. Jol. of Rad. and Isot. 44 (1992) 541.

39. HIGH SPIN STATES IN ^{120}Xe. *J.Goswamy, A.Sharma, D.Mehta, B.Chand, N.Singh, P.N.Trehan, P.Singh, R.G.Pilley, H.G.Devare, R.K.Bhowmik and C.R.Praharaj.* Z. Phys. A 344 (1992) 233.

40. STRONGLY COUPLED ROTATIONAL BANDS IN ^{199}PB AND ^{200}PB: SHAPE COEXISTENCE IN ^{199}Pb AND ^{200}Pb. *G.Baldseifen, H.Hubel, D.Mehta, B.V.T.Rao, U.Birkental, G.Frolingsdorf, M.Neffgen, N.Nenoff, N.Singh, W.Schmitz, K.Theine, P.Willsau, H.Grawe, J.Heese, H.Kloge, K.H.Maier, M.Schramm, R.Schubart, F.Hannachi and H.J.Maier.* Phys. Lett. B275 (1992) 252.

41. HIGH SPIN STATES AND TRANSITION RATE IN ^{163}Lu. *W.Schmitz, X.Yang, H.Hubel, A.P.Byrne, R.Mubeler, N.Singh, A.Kuhnhert, K.H.Maier, G.Hebbinghaus and H.Schnare.* Nucl. Phys. A539 (1992) 112.

42. DIPOLE BANDS IN ^{194}Pb. *D. Mehta, W. Korten, H. Hubel, K. Theine, P. Willsau, C.X. Yang, F. Hannachi, D.B. Fossan, H. Grawe, H. Kluge and K.H. Maier.* Z. Phys. A 346 (1993) 169.

43. M SHELL X-RAY PRODUCTION CROSS-SECTIONS AND FLUORESCENCE YIELDS FOR THE ELEMENTS WITH $71 \leq Z \leq 92$ USING 5.96 keV PHOTONS. *S. Puri, D. Mehta, B. Chand, N. Singh, P.C. Mangal and P.N. Trehan.* Nucl. Instrum. and Methd. B 73 (1993) 319.

44. MEASUREMENTS OF K TO L SHELL VACANCY TRANSFER PROBABILITIES FOR THE ELEMENTS $37 \leq Z \leq 42$. *S. Puri, D. Mehta, B. Chand, N. Singh and P.N. Trehan.* Nucl. Instrum. and Methd. B 73 (1993) 443.

45. MEASUREMENTS OF L TO M SHELL VACANCY TRANSFER PROBABILITIES FOR ELEMENTS $70 \leq Z \leq 92$. *S.Puri, D.Mehta, B.Chand, N. Singh and P.N.Trehan.* Nucl. Instrum. and Methd. B 74 (1993) 347.

46. PRODUCTION OF L SUB-SHELL AND M SHELL VACANCIES FOLLOWING INNER SHELL VACANCY PRODUCTION. *S. Puri, D. Mehta, B. Chand, N. Singh and P.N. Trehan.* Nucl. Instrum. and Methd. B 83 (1993) 21.

47. L SHELL FLUORESCENCE YIELDS AND COSTER-KRONIG TRANSITION PROBABILITIES FOR ELEMENTS $25 \leq Z \leq 96$. *S. Puri, D. Mehta, B. Chand, N. Singh and P.N. Trehan.* X-ray Spectrometry 22 (1993) 358.

48. HIGH SPIN STATES IN ^{117}Te.*A.Sharma, J.Goswamy, D.Mehta, B.Chand, N.Singh and P.N.Trehan.* Z. Phys. A 344 (1993) 349.

49. STUDY OF ^{82}Br DECAY. *J.Goswamy, A.Sharma, B.Chand, D.Mehta, N.Singh and P.N.Trehan.* Int. J. Appl. Rad. and Isot. 45 (1993) 309.

(c) After Joining Teaching Jobs as Lecturer (1993-1999):

50. A REVIEW BIBLIOGRAPHY AND TABULATION OF K, L AND HIGHER ATOMIC SHELL X-RAY FLUORESCENCE YIELDS. *J.H. Hubbell, P.N. Trehan, N. Singh, B.Chand, M.L. Garg, D. Mehta, R.R. Garg, S. Singh and S. Puri.* J. Phys. Chem. Ref. Data 23 (1994) 339.

51. A NEW BAND IN DOUBLY-ODD ^{118}I. *Harjeet Kaur, J.Goswamy, Jagbir Singh, A.Sharma, D.Mehta, N. Singh, R.K. Bhowmik and P.N.Trehan.* Z.Phys.A 350 (1994) 183.

52. SHEARS BANDS IN ^{199}Pb AND ^{200}Pb. *G. Baldsiefen, H. Hubel, W. Korten, D. Mehta, N. Nenoff, B.V. Thirumala Rao, P. Willsau, J. Heese, H. Kluge, K.H. Maier, R. Schubart, S. Frauendorf, H.J. Maier.* Nucl. Phys. A 574 (1994) 521.

53. PHOTON EMISSION PROBABILITIES IN ^{147}Nd DECAY. *J.Goswamy, B.Chand, D.Mehta, N.Singh and P.N.Trehan.* Rad. Phys. and Chem.(1995).

54. BAND STRUCTURES IN DOUBLY-ODD ^{120}I NUCLEUS. *Harjeet Kaur, J.Goswamy, Jagbir Singh, A.Sharma, D.Mehta, N. Singh, R.K.Bhowmik and P.N.Trehan.* Z.Phys.A 352 (1995) 11.

55. LIFETIMES OF SHEARS BANDS IN ^{199}Pb. *M. Neffgen, G. Baldsiefen, S. Frauendorf, H. Grawe, J. Heese, H. Hubel, H. Kluge, A. Korichi, W. Korten, K.H. Maier, D. Mehta, J. Meng, N. Nenoff, M. Piiparinen, M. Schonhofer, R. Schubart, U.J. Van Severen, N. Singh, B.V. Thirumala Rao and P. Willsau.* Nucl. Phys. A 595 (1995) 499.

56. NON-COLLECTIVE OBLATE STATES IN ^{119}Te. *Jagbir Singh, Harjeet Kaur, J.Goswamy, A.Sharma, D.Mehta, N.Singh, R.K.Bhowmik and P.N.Trehan.* Z.Phys.A 153 (1995) 239

    HIGH SPIN STRUCTURES IN ^{119}Te. *Jagbir Singh, J.Goswamy, A.Sharma, Harjeet Kaur, D.Mehta, N. Singh, P.N.Trehan, R.K.Bhowmik, R.S.Chakrawarthy, Pragya Singh and B.Srinivasan.* Z.Phys.A 351 (1995) 3.

57. NON-COLLECTIVE OBLATE STATES IN ^{121}Te. *Jagbir Singh, Harjeet Kaur, J.Goswamy, A.Sharma, D.Mehta, N.Singh, R.K.Bhowmik and P.N.Trehan.* Z.Phys.A 353 (1996) 125.

58. HIGH SPIN STATES IN ^{116,118}Te. *A.Sharma, Jagbir Singh, Harjeet Kaur, J.Goswamy, , D.Mehta, N.Singh, R.K.Bhowmik and P.N.Trehan.* Z.Phys.A 353 (1995)125.

    HIGH SPIN STRUCTURES IN ^{118}Te. *A.Sharma, Jagbir Singh, Harjeet Kaur, J.Goswamy, D. Mehta, N. Singh, R.K. Bhowmik and P.N.Trehan.* Z.Phys.A 351 (1995) 131.

    HIGH SPIN STATES IN ^{116}Te. *A.Sharma, J.Goswamy, D.Mehta, J.Singh, H.Kaur, B.Chand, N.Singh, R.K.Bhowmik and P.N.Trehan.* Z. Phys. A 346 (1993) 321.

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