

Curriculum Vitae



1. **Name** : Sanjiv Puri
2. **Designation** : Professor
3. **Department** : Physics
4. **Date of Birth** : May 31, 1967
5. **Address for Correspondence:** : Punjabi University, Patiala-147002
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sanjivpuriucoe@gmail.com

6. **Areas of Specialization:** Experimental Atomic Physics (Photon-atom interactions / Ion-atom collisions / Elemental analysis using EDXRF and PIXE techniques).

7. Academic Qualifications

Sr. No.	Degree	Year	Board/Univ.	Division	Subjects Studied
1	B.Sc.	1986	PU, Chd.	Ist	Phys., Chem., Mathematics
2	M.Sc.	1988	PU, Chd.	Ist	Physics
3	Ph.D.	1995	PU, Chd.	--	Experimental Atomic Physics
4	NET exam	1990	UGC-CSIR	Qualified	Physical Sciences

8. Scholarships / Fellowships

S. No.	Period	Fellowship Awarded	Name and place of Host Institution
1.	Jan., 1991- Dec., 1992	Junior Research Fellow (Awarded by UGC, N. Delhi)	Dept. of Physics, Panjab University, Chandigarh-160014, India.
2.	Jan.-Aug., 1993	Visiting Scientist (Awarded by International Science Programs, Uppsala, SWEDEN.)	Dept. of Nuclear physics, University of Lund, Lund, Sweden.
3.	Sept., 1993 Sept., 1994	Senior Research Fellow (Awarded by UGC, N. Delhi)	Dept. of Physics, Panjab University, Chandigarh-160014, India.
4.	Nov., 1998 - Feb., 1999	Visiting Scientist (Awarded by Punjab State Council for Science and Technology (PSCST) Under <i>Young Scientist Fellowship</i> scheme, Punjab, India)	Dept. of Physics, Panjab University, Chandigarh-160014, India.
5.	June-July 2002	Visiting Scientist (Awarded by Indian National Science Academy (INSA), N. Delhi, India)	Dept. of Physics, Panjab University, Chandigarh-160014, India.

9. Membership of Professional Bodies / Organizations

- i) Life member, Indian Society for Radiation Physics (ISRP)
- ii) Life member, Indian Physics Association (IPA)
- iii) Indian Society of Atomic and Molecular Physics (ISAMP)

10. Citations of Research publications

(**ORCID ID: 0000-0001-7669-3198** and **SCOPUS ID 7202592160**)

Web of Science ID JAC-5308-2023

	As per SCOPUS	As per Research Gate	As per Google Scholar
Citations	2117	2270	2561
h-index	23	24	25
i10	-	-	45

11. Details of Employment

S. No.	Name of the Inst. / Employer	Position Held	Duration	Job Responsibilities
1.	SLIET, Longowal (Deemed University)	Lecturer (Phys.)	Sept. 1994 – Aug., 2002	Teaching and Research
2.	SLIET, Longowal (Deemed University)	Assistant Prof. (Phys.) (Equivalent to Reader)	Aug. 2002 – Aug., 2005	Teaching and Research
3.	U.Co.E., Punjabi University, Patiala	Reader (Phys.)	Aug., 2005 – Dec., 2005	Teaching and Research
4.	U.Co.E., Punjabi University, Patiala	Associate Prof. (Phys.)	Jan., 2006 - Dec, 2008	Teaching and Research
5.	Department of Basic and Applied Sciences, Punjabi University, Patiala	Professor (Phys.)	Jan., 2009 – March, 2022	Teaching and Research
6.	Department of Physics, Punjabi University, Patiala	Professor (Phys.)	1 April, 2022 onwards	Teaching and Research

12. Administrative / Academic Responsibilities

- ✦ **Registrar, Punjabi University** from 05-08-2024 onwards
 - ✦ **Dean FYIP** from 01-07-2023 to 30-06-2024
 - ✦ **Director**, Planning and Monitoring, Punjabi University, Patiala from 01-04-2022 to 30-06-2024
 - ✦ **Dean, Faculty of Physical Sciences** from 01-01-2022 to 31-12-2023
 - ✦ **Head**, Dept. of Basic and Applied Sciences, Punjabi Univ. from Sept., 2013 to June, 2018.
 - ✦ **In-charge**, Basic and Applied Sciences, Punjabi Univ. from Nov., 2008 to Sept., 2013.
 - ✦ **Member Secretary**, SYNDICATE of Punjabi University from 05-08-2024 onwards
 - ✦ **Member**, ACADEMIC COUNCIL, Punjabi Univ. for session 2015-16, 2021-22, 2022-23
 - ✦ **Member**, PLANNING BOARD (in capacity of DPM), PUP during Sept., 2022-Sept 2024
 - ✦ **Nominated member** of “Regulation Committee” of Punjabi University during 2021-2023.
 - ✦ **Coordinator**, Multi-Disciplinary Five-Year Integrated Post Graduate Program (MD-FYIPGP) in Physical and Chemical Sciences (Major: Physics / Chemistry) (Honours School system) July, 2021 onwards.
 - ✦ **Chairman**, “Board of Studies for MD-FYIPGP in Physical and Chemical Sciences” for 2021-22 onwards.
 - ✦ **Program Coordinator**, 5 Year Integrated M.Sc. Programme in Physics (Honours School system), 2019-20, 2020-21, 2021-22.
 - ✦ **Chairman**, “Board of studies in Basic and Applied Sciences” Punjabi Univ. from July, 2014 - July, 2018.
 - ✦ **Member**, “Board of Studies in Basic and Applied Sciences” Punjabi Univ. from July, 2014 - July 2022.
 - ✦ **Member**, “Board of Post-Graduate studies in Physics”, Punjabi Univ., Jan 2023 onwards
 - ✦ **Member**, “Board of Under-Graduate studies in Physics”, Punjabi Univ., Jan 2023 onwards
 - ✦ **Member**, BPSAR, Faculty of Physical Sciences, Punjabi Univ., Patiala from Sept., 2014 onwards.
 - ✦ **Member**, “Research Award Committee” (RAC), Faculty of Physical Sciences, Punjabi Univ. during Jan. 2019-Jan. 2021; Jan, 2021-Jan, 2023.
 - ✦ **Nominated Subject expert**, “Board of studies in Physics” of Maharaja Ranjit Singh Punjab Technical University, Bathinda during 2022-2024.
 - ✦ **Nominated Subject expert**, “UG and PG Board of studies in Physical Sciences, Nano Sciences and Engineering” of I K Gujral Punjab Technical University, Jalandhar during 2023-2025.
 - ✦ **Nominated Subject expert**, “PG Board of studies in Physics” at Mata Gujri College (Autonomous), Fatehgarh Sahib during 2023-2026.
 - ✦ **Nominated Subject expert**, “Academic Council” SD Girls College, Bathinda (2024-25).
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- ✦ **Nominated Subject expert**, “Academic Council”, GTB Khalsa College, Anandpur Sahib, Ropar (2024-25).
 - ✦ **Co-Coordinator**, Central Admission Cell, Punjabi Univ. for admissions during 2016-17.
 - ✦ **Coordinator**, B. Tech. Admission Committee for 2015-16.
 - ✦ “**VC Nominee / Member, Selection / Screening committees**” for promotions under CAS of UGC and for appointments of Assistant Professors / Associate Prof. / Professor in Punjabi University and its affiliated colleges.
 - ✦ **Convener / Member** of different committees constituted by Punjabi Univ. for inspection of affiliated Colleges, Departmental committees (fee-concession committee, anti-ragging committee and different purchase committees) constituted from time to time since 2006.

13. List of Courses/papers taught

S. No.	Paper	Class
1.	Modern Physics	FYIP B.Sc.-M.Sc. Physics (HS) Part II
2.	Nuclear and Particle Physics	FYIP B.Sc.-M. Sc. Physics (HS) – Part III
3.	X-ray Fluorescence Spectrometry	M. Sc. / FYI M.Sc. Phys (Hons) - Part II
4.	Experimental techniques in Physics	Ph.D. (Physics) course work
5.	C programming and Numerical methods (Lab courses)	FYIP M.Sc. Physics (HS) – Part I
6.	Applied Physics I & II	B. Tech.-I

14. Research Profile (i) Published Work (Please specify numbers only)

- Research Papers in SCOPUS/SCI International Journals: 88
- Research Papers presented in Conference/Symposia: 76
- Books (Original): 02
- Chapters in Books: 02

(ii) R & D Projects

- A project titled “Investigation of processes following L and M shell photoionization and analytical applications using EDXRF technique” worth **Rs.17.85lacs** awarded to me as *Principal Investigator* by the **Department of Science and Technology (DST), N. Delhi** vide no. SR/S2/LOP-19/2006, for a period of three and a half years (Aug., 2007 – Feb., 2011) was implemented at U.Co.E., Punjabi Univ., Patiala.
- A project titled “Investigation of photon atom interaction processes at incident energies across the Li ($i=1-3$) subshell absorption edges for some medium Z elements using synchrotron radiation” worth **EURO12,000** awarded to me as Principal Investigator for conducting experiments at “Elletra Synchrotron”, Italy by **International Atomic Energy Agency (IAEA), Austria** vide contract no. 18259 in April, 2014-2018.
- A project titled “Investigation of Chemical effects on the K/L X-ray intensity ratios and absorption edge energy shifts in different compounds of some medium and high Z elements using synchrotron radiation” worth **Rs.8.54Lacs** awarded to me as Principal Investigator for conducting experiments at Raja Rmanna Centre for Advanced Technology (RRCAT), Indore by **UGC-DAE Consortium for Scientific Research, Indore** vide no. CSR-IC-ISUM-51/CRS-334/2020-21/792 dated March 4, 2021-23.

I was one of the collaborating investigators in the following projects.

- A project titled “Photon Scattering in the x-ray energy region & its applications in energy dispersive xray fluorescence technique” worth Rs.9.5lacs sanctioned by Department of Science and Technology (DST) in 1997 vide no. SP/S2/L-06/96 (Principal Investigator: Prof. Nirmal Singh).
- A project titled “Investigations of the elastic and inelastic scattering processes in the X-ray energy region” worth Rs.7.00lacs sanctioned by Department of Science and Technology (DST) in 2003 (Principle Investigator: Prof. Nirmal Singh).

(iii) Invited Talks / Chairing a session / Resource person / Course Coordinator

- Delivered an invited Lecture as **Resource Person** in ISTE sponsored short term course held at SLIET, Longowal during February 14-25, 2000.
- Delivered an **invited Lecture** on “*Source apportionment studies using receptor modelling for air pollution monitoring*” in Seminar on “Computational Techniques in Physics” held at department of Physics, Panjab University, Chandigarh, during March 6-7, 2002.
- Delivered an invited Lecture as a **Resource Person** in AICTE sponsored Staff Development Programme held at SLIET, Longowal during 7-18 Nov., 2005.
- Delivered **invited talk** on “*Recent Investigations of Li ($i=1-3$) Sub-shell Physical Parameters for XRP Cross sections and Intensity Ratios for Rare-earth Elements*” during National Symposium on “Radiation Physics and Nanomaterials” (NSRPN-11) held at Department of Physics, Punjabi University, Patiala during Feb. 4-5, 2011.
- Chaired a technical session** during the National Conference on Advanced Materials and Radiation Physics (AMRP-2011) held at SLIET, Longowal during Nov. 4-5, 2011.
- Delivered an **invited talk** on “*Recent Investigations of Chemical effects on L_i ($i=1-3$) sub-shell x-ray relative intensities*” during international conference on “Emerging trends in Physics for environmental monitoring and management” (ETPEMM-12) held at Department of Physics, Punjabi University, Patiala, during Dec. 17-19, 2012.
- Delivered an **invited talk** on “*X-ray emission techniques for elemental analysis*” at Department of Applied Sciences, Chandigarh University, Gharuan, Mohali on Nov. 11, 2013.
- Delivered an invited talk as **Resource Person** on “*Nuclear techniques for elemental analysis*” in a Short term course titled “Nuclear Techniques and Instrumentation” organised by Department of Applied Sciences, NITTTR, Chandigarh during 21-25 Oct., 2013.
- Delivered **invited talk** on “*Recent Investigations of L shell Physical Parameters for Photoionization Processes Using EDXRF Technique*” in the XRF meeting at RRCAT, Indore during March 19-20, 2013.

10. Delivered **invited talk** on “*Investigation of photon atom interaction processes at incident energies across the $L_i(i=1-3)$ sub-shell absorption edges for some medium Z elements using synchrotron radiation*” in the RCM-1 and RCM-2 of the Co-ordinated Research Project (G42005) organised by International Atomic Energy Agency (IAEA), Austria at ELETTRA Synchrotron, Trieste, ITALY during July 21-25, 2014 and May 30 – June 03, 2016, respectively.
11. **Chaired a technical session** during the 4th National Conference on Advanced Materials and Radiation Physics (AMRP-2015) held at SLIET, Longowal during March 13-14, 2015.
12. Delivered **invited talk** on “*Atomic Inner-shell ionization processes and analytical application using X-ray emission techniques*” during Industry Academia week organised by PEC University of Technology, Chandigarh during April 6-10, 2015.
13. Delivered talk on “*Material composition analysis using EDXRF and PIXE techniques*” as **Resource Person** during Refresher Course organized by Human resource development Centre, Punjabi Univ., Patiala, on June 12, 2015.
14. Delivered talk on “*Elemental composition analysis using techniques based on photon-atom interaction processes*” as **Resource Person** during Refresher Course organized by Human resource development Centre, Punjabi Univ., Patiala, on June 27, 2016.
15. Delivered an invited talk on “*X-ray based analytical techniques*” as **Resource person** in a STC organised by Department of Applied Sciences, NITTTR, Chandigarh during 20-24 March, 2017.
16. Delivered a talk on “*Study of energy and charge state dependence of cross sections for production of the line resolved M X-rays of some heavy elements by low energy ion beams*” in **63rd Accelerator Users workshop** held at IUAC, Delhi during 16-18 Dec., 2017.
17. Delivered a talk on “*Investigation of projectile -energy and -Z dependence of cross sections for production of M X rays of some heavy elements by low velocity ion beams.*” in **64rd Accelerator Users workshop** held at Inter-University Accelerator Centre, Delhi during 5-7 July, 2018.
18. Delivered an **invited talk** on “*Recent measurements of fundamental physical parameters characterizing x-ray emission processes using synchrotron radiation*” in the **Consultancy meeting organized at HEADQUARTERS of “International Atomic Energy Agency (IAEA)”, Vienna, Austria** during 17-21 Dec., 2018.
19. Delivered a talk on “*Recent Investigations of Photon-atom interaction processes in X-ray Energy region and analytical applications*” as **Resource Person** during Refresher Course organized by Human resource development Centre, Punjabi Univ., Patiala, on Dec., 3, 2019.
20. Delivered an **invited talk** on “*Recent Investigations of Synchrotron Radiation Induced Atomic Innershell Photoionization Processes*” during the 5th National Conference on “Advanced Materials and Radiation Physics (AMRP-2020)” held at SLIET, Longowal during Nov. 9-11, 2020.
21. **Chaired a technical session** during the 5th National Conference on “Advanced Materials and Radiation Physics (AMRP-2020)” held at SLIET, Longowal during Nov. 9-11, 2020.
22. Delivered an **invited talk** on “*Recent investigations of M -shell ionization processes induced by low velocity ion impact on some heavy elements*” during workshop on “Atomic and Molecular Physics with ion beams” held at IUAC, New Delhi during 17-18 Nov., 2021
23. Delivered a talk on “*Analytical techniques for elemental analysis*” as **Resource Person** during Refresher Course organized by Human resource development Centre, Punjabi Univ., Patiala, on Dec., 09, 2021.
24. **COURSE-COORDINATOR for Refresher Course in Physics** organized by Human resource development Centre, Punjabi Univ., Patiala, during 27 Oct. – 09 Nov, 2022.
25. Delivered a talk on “*Analytical techniques for Material composition analysis*” as **Resource Person** during Refresher Course organized by Human resource development Centre, GNDU, Amritsar, on Nov., 14, 2022.
26. Delivered an **invited talk** on “*Investigations of low velocity ions induced M X-ray emission in some heavy elements*” during the 6th National Conference on “Advanced Materials and Radiation Physics (AMRP-2023)” held at SLIET, Longowal during May 18-19, 2023.
27. **Chaired a technical session** during the 6th National Conference on “Advanced Materials and Radiation Physics (AMRP-2023)” held at SLIET, Longowal during May 18-19, 2023.
28. Delivered an **invited talk** on “*Investigations of fundamental parameters for M-shell ionization in some heavy elements induced by low velocity ions*” during National Seminar cum Workshop on "Recent trends in Basic and Applied Nuclear Physics” held at Panjab University, Chandigarh on 22-23 November, 2023.
29. Delivered a talk on “*National education policy: An overview*” as **Resource Person** during Orientation Program organized by UGC-MMTTC, Punjabi Univ., Patiala, on Nov., 07, 2024.

(IV) Mentor of Post Doctoral Fellow

S, No.	Name of Student	Fellowship providing agency	Duration
1.	Dr. Harpreet Singh Kainth	UGC – D. S. Kothari Fellowship	June, 2019 – June 2022

(V) Ph.D. Students guided / under guidance (Details):

S. No.	Name of the Student	Title of Thesis	Year of Completion / Registration
1.	Mr. Yogeshwar Chauhan	Study of processes following L and M shell Photoionization using EDXRF technique and analytical application.	2012
2.	Mr. Anil Kumar	Investigations of physical parameters for X-ray production cross sections using EDXRF technique.	2012
3.	Ms. Rajnish Kaur	Investigation of photon atom interaction processes at energies across the atomic inner-shell ionization thresholds of different elements using synchrotron radiation.	2019
4.	Ms. Shehla	Investigation of physical parameters for processes following atomic inner-shell ionization by ion impact	2019
5.	Ms. Vibha Ayri	Study of Synchrotron radiation induced inner-shell photoionization processes at energies across the Li absorption-edges of some heavy elements	2023
6.	Ms. Sandeep Kaur	Investigation of fundamental parameters for photon-atom interaction processes at energies near absorption-edges of some medium Z elements	2023
7.	Mr. Balwinder Singh	Investigation of charged particle induced atomic inner-shell ionization processes in some heavy elements	Thesis submitted Feb 2025
8.	Mr. Harpreet Singh	Study of Fundamental Physical Parameters for Synchrotron Radiation Induced L- and M-series X-ray Emission in Some Heavy Elements	Registered Oct., 2022
9.	Ms Priya	Investigation of atomic inner-shell ionization processes at synchrotron radiation energies across the absorption-edge energies of some heavy elements	Registered in Oct. 2024

(VI) Overseas visits for research purposes

S. No.	Purpose	Duration
1.	Visiting Scientist at the Dept. of Nuclear Physics, University of Lund, with Fellowship awarded by the "International Science Programs", Uppsala, SWEDEN.	Jan. – Aug., 1993
2.	Attended summer school on "Synchrotron Radiations" held at "The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, ITALY.	April 19 –May 22, 1999
3.	Attended a first meeting of the Research Coordination meeting organized by International Atomic Energy Agency (IAEA), Austria held at the ELETTRA Synchrotron, Trieste, ITALY.	July 21-25, 2014
4.	To Perform experiments at ELETTRA Synchrotron , Trieste, ITALY.	Dec. 18-23, 2015
5.	Attended a second meeting of the Research Coordination meeting organized by IAEA, Austria held at the ELETTRA Synchrotron, Trieste, ITALY.	May 30 – June 03, 2016
6.	To perform experiments at ELETTRA Synchrotron , Trieste, ITALY.	Nov. 02-07, 2016
7.	To perform experiments at ELETTRA Synchrotron , Trieste, ITALY.	Dec. 03-11, 2017
8.	Invited To attend Consultancy meeting held at IAEA headquarters , Vienna, Austria.	Dec., 17-21, 2018
9.	To perform experiments at ELETTRA Synchrotron , Trieste, ITALY.	Mar. 03-12, 2019
10.	To perform experiments at ELETTRA Synchrotron , Trieste, ITALY.	Dec. 08-16, 2019

(VII) Visits to National Research Laboratories

No..	Purpose	Duration
1.	To perform experiments at INDUS-II Synchrotron , RRCAT, Indore.	Jun. 12-16, 2012
2.	To attend first interaction meeting on "Synchrotron based X-ray fluorescence (XRF) techniques" held at RRCAT, Indore	Mar. 19-20, 2013
3.	To perform experiments at INDUS-II Synchrotron , RRCAT, Indore.	Jun. 10-13, 2013
4.	To perform experiments at INDUS-II Synchrotron , RRCAT, Indore.	Mar. 30-April 03, 2015
5.	To perform experiments at ECR ion accelerator, TIFR, Mumbai.	Nov. 21-26, 2016
6.	To attend 63 rd Accelerator User workshop at Inter-University Accelerator Centre (IUAC), Delhi	Dec. 16, 2017
7.	To perform experiments at Low energy ion beam facility (LEIBF), Inter-University Accelerator Centre (IUAC), Delhi.	May 09-12, 2018
8.	To perform experiments at Low energy ion beam facility (LEIBF), Inter-University Accelerator Centre (IUAC), Delhi.	April 18-21, 2022
9.	To perform experiments at Atomic Physics Beamline of PELLETRON, Inter-University Accelerator Centre (IUAC), Delhi.	March 5-12, 2023

(VIII) Technical Proficiency

I have long experience of handling sealed radioactive sources, low/high power X-ray tubes, vacuum chamber, cryogenic and Peltier-cooled solid-state x-ray / γ -ray detectors and associated electronic modules such as power-supplies, spectroscopy amplifiers, ADC and PC based multi-channel analysers and associated software. For past several years, I have been using the XRF beam lines at the Synchrotron Radiation facilities at RRCAT, Indore, India and Elettra Synchrotron, Trieste, Italy for Fundamental Parameter measurements and the atomic physics beam lines at the particle-accelerators, TIFR, Mumbai and IUAC, New Delhi for ion-atom collision studies.

(IX) Reviewer / Referee for International Research Journals

“Nuclear Instruments and Methods B”; “Chemical Physics Letters”; “Radiation Physics and Chemistry”; “Radiation effects and defects in solids”; “Pramana - J. Phys.”; “Spectroscopy Letters”; “Canadian J. of Physics”; “Journal of Electron spectroscopy and Related Phenomenon”; “Heliyon”; “American Mineralogist”; “Radiation effects and defects in solids”; “Macromolecular Symposia”; “Applied Radiation and Isotope”; “X-Ray Spectrometry”; “Journal of Atomic Analytical Spectroscopy (JAAS)”; “Measurement”;

(X) List of Books Published

- a. A book titled “**Modern Physics: concepts and applications**” authored by myself has been published by NAROSA Publishing Co., N. Delhi (First Edition in 2004). [ISBN: 978-81-7319-557-0]
This text-book will be useful for B.Sc. and B.E / B. Tech. students taking up Modern Physics course, as well as for those appearing in the National Education Test (NET) being conducted by UGC-CSIR.
- b. A book titled “**Physics for Engineering Applications**” authored by myself has been published by NAROSA Publishing Co., N. Delhi (First Edition in 2010). [ISBN: 978-81-8487-041-1]
This textbook provides syllabus for *foundation course in Physics* being offered to the Engineering (B.E B.Tech.) students. It will be very useful for students appearing for Graduate Aptitude Test for Engineering (GATE) and those appearing in the National Education Test (NET) conducted by UGC-CSIR.

(XI) Chapters in Books

- (a) A chapter titled “**Role of Trace Elements in Breast Cancer and Their Characterization Using X-Ray Fluorescence Techniques**” in the book titled “Trace Elements and Its Effects on Human Health and Disease” published by “IntechOpen” (License CC BY 3.0) ISBN 978-1-83968-645-0
Harpreet Singh Kainth, Deeksha Khandelwal, Ranjit Singh, Gurjeet Singh and Sanjiv Puri
December 2020, DOI: [10.5772/intechopen.95491](https://doi.org/10.5772/intechopen.95491) <https://www.intechopen.com/online-first/role-of-trace-elements-in-breast-cancer-and-their-characterization-using-x-ray-fluorescence-technique>.
- (b) A chapter titled “**Lab-scale Wavelength Dispersive X-Ray Fluorescence Spectrometer and Signal Processing Evaluation**” in the book titled “X-Ray Fluorescence in Biological Sciences: Principles, Instrumentation and Applications” published by “John Wiley and Sons”, ISBN: 9781119645719 (online) and 9781119645542 (Print)
Harpreet Singh Kainth, Tejbir Singh, Gurjeet Singh, Devinder Mehta and Sanjiv Puri April 2022,
DOI: 10.1002/9781119645719.ch33

(XII) Papers published in International peer reviewed Research Journals

1. *Physical parameters for L X-ray production cross-sections.*
Sanjiv Puri, B. Chand, M.L. Garg, Nirmal Singh, J.H. Hubbell and P.N. Trehan
X-ray Spectrometry **21** (1992) 171-174 (IF 1.29, ISSN: 1097-4539) (Citations: 14)
2. *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. **B72** (1992) 147-152 (IF 1.11, ISSN NO. 0168-583X) (Citations: 59)
3. *M Shell x-ray production cross-sections and fluorescence yields for the elements with $71 \leq Z \leq 92$ using 5.96 keV photons.*
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh, P.C. Mangal, and P.N. Trehan ;
Nucl. Instrum. and Methd. **B73** (1993) 319-323 (IF 1.11, ISSN NO. 0168-583X) (Citations: 38)
4. *Measurements of K to L shell vacancy transfer probabilities for the elements $37 \leq Z \leq 42$.*
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh and P.N. Trehan ;
Nucl. Instrum. and Methd. **B73** (1993) 443-446 (IF 1.11, ISSN NO. 0168-583X) (Citations: 30)
5. *Measurements of L to M shell vacancy transfer probabilities for elements $70 \leq Z \leq 92$.*
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh and P.N. Trehan ;
Nucl. Instrum. and Methd. **B74** (1993) 347-351 (IF 1.11, ISSN NO. 0168-583X) (Citations: 29)
6. *Production of L sub-shell and M shell vacancies following inner shell vacancy production.*
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh and P.N. Trehan ;
Nucl. Instrum. and Methd. **B 83** (1993) 21-30 (IF 1.11, ISSN NO. 0168-583X) (Citations: 56)

7. *L* shell fluorescence yields and Coster-Kronig transition probabilities for elements $25 \leq Z \leq 96$.
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh and P.N. Trehan ;
X-ray Spectrometry 22 (1993) 358-361. (I.F. 1.29, ISSN: 1097-4539) (Citations: 256)
 8. *A review bibliography and tabulation of K, L and higher atomic shell X-ray fluorescence yields.*
J.H. Hubbell, P.N. Trehan, Nirmal Singh, B. Chand, M.L. Garg, D. Mehta, R.R. Garg, S. Singh and Sanjiv Puri;
J. Phys. Chem. Ref. Data 23 (1994) 339-364. (I.F. 4.2, ISSN NO. 0047-2689) (Citations: 686)
 9. *K and L shell X-ray fluorescence cross sections.*
Sanjiv Puri, B. Chand, D. Mehta, M. L. Garg, Nirmal Singh and P.N. Trehan;
Atom. Data and Nucl. Data Tables 61 (1995) 289-311. (IF 2.57, ISSN No. 0092-640X) (Citations: 124)
 10. *Urban air pollution source apportionment using a combination of aerosol and gas monitoring techniques.*
E. Swietlicki, Sanjiv Puri and H.C. Hansson;
Atmosphere Environment 30 (1996) 2795-2809. (I.F. 3.629, ISSN NO.1352-2310) (Citations: 199)
 11. *An evaluation of the sources of air pollution in the city of Chandigarh, India - A study using EDXRF technique.*
H.K. Bandhu, Sanjiv Puri, J.S. Shahi, D. Mehta, M.L. Garg, P.C. Mangal, Nirmal Singh, E. Swietlicki and P.N. Trehan ;
Nucl. Instrum. and Methd. B114 (1996) 341-344. (IF 1.11, ISSN NO. 0168-583X) (Citations: 21)
 12. *Differential Cross-section Measurements for the Elastic Scattering of 59.5 keV Photons by Elements in the Atomic Region $13 \leq Z \leq 82$.*
Sanjiv Puri, D. Mehta, B. Chand, Nirmal Singh and P.N. Trehan
Nucl. Instrum. and Methd. B111 (1996) 209-214 (IF 1.11, ISSN NO. 0168-583X)
 13. *The $L_{\gamma 1,5}$, $L_{\gamma 2,3,6}$, $L_{\gamma 4}$ and $L\alpha$ and $L\alpha$ XRF Cross sections for Elements with $71 \leq Z \leq 83$ at 22.6 keV.*
Sanjiv Puri, D. Mehta, Nirmal Singh and P.N. Trehan
Phys. Rev. A 54 (1996) 617-623 (IF 2.925, ISSN NO.1050-2947) (Citations: 46)
 14. *Elemental composition of fly ash from a coal fired thermal power plant - A study using PIXE and EDXRF.*
V. Vijayan, S.N. Behera, V.S. Ramamurthy, Sanjiv Puri, J.S. Shahi and Nirmal Singh
X-ray Spectrometry 26 (1997) 65-68. (I.F. 1.29, ISSN: 1097-4539) (Citations: 75)
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13. *L_1 - L_3 Coster-Kronig yields for elements with $70 \leq Z \leq 92$.*
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Proc. NSRPN-11, 2011, 30.
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 36. *Measurements of the L_i ($i=1-3$) sub-shell intensity ratios for W at 15 keV incident photon energy.*
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 38. *Measurements of resonant Raman scattering differential cross sections for W using synchrotron radiation.*
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 39. *Theoretical X-ray Production Cross Sections at Incident Photon Energies across L_i ($i=1-3$) Absorption Edges of Br.*
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47. *Parameterization of Proton Induced K shell X-ray Production Cross Sections for $Z = 22-40$* Shehla and **Sanjiv Puri**
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48. *Measurements of $L1$ to $L3$ subshell Coster-Kronig transition probability for ^{66}Dy* Rajnish Kaur, Anil Kumar, M. Czyzycki, A. Migliori, A. G. Karydas and **Sanjiv Puri**
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49. *Li ($i=1-3$) subshell X ray intensity ratios for ^{66}Dy using synchrotron radiation*
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50. *M_i ($i=1-5$) sub-shell X-ray production cross section measurements at photon energies in vicinity of the L_j ($j=1-3$) subshell absorption edge energies of ^{66}Dy*
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51. *M X-ray production cross sections by 100-250 keV proton Impact of ^{70}Yb .*
Shehla, A. Mandal, Ajay Kumar, M. Roy Chowdhury, L. C. Tribedi and **Sanjiv Puri**,
13th Asian International Seminar on Atomic and Molecular Physics, December 03-08, 2018. e-Book of Abstracts PB 41, Page no. 153
52. *Parameterization of Proton Induced K X-Ray Production Cross Sections for $Z= 42-70$.*
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53. *Energy dependence of the line resolved M_i ($i=1-5$) sub-shell X-ray production cross section & intensity ratio for ^{82}Pb*
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54. *M_i ($i=1-5$) sub-shell X-ray production cross-sections for ^{75}Re at incident photon energies $1.8 < E_{inc} < 60$ keV* Vibha Ayri, Sandeep Kaur, Anil Kumar and **Sanjiv Puri**
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55. *Low energy N^{7+} ion induced M_j sub-shell X-ray production cross sections for ^{79}Au , ^{82}Pb and ^{83}Bi* Shehla, Ajay Kumar, Anil Kumar, C. Bagdia, L.C. Tribedi and **Sanjiv Puri**
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56. *M X-ray relative intensities for ^{70}Yb by C ion impact*
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57. *Measurements of L X ray Intensity Ratios for ^{51}Sb at Incident Photon Energies across its Li ($i=1-3$) Edge Energies*
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58. *To investigate the universal behavior of $^4\text{He}^{+q}$ ion induced M X-ray production cross sections*
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59. *Measurements of L X-Ray Intensity Ratios for ^{75}Re at Incident Photon Energies across its Li ($i=1-3$) Edge Energies.*
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60. *Influence of wave function on proton induced M XRP cross sections for ^{71}Lu and ^{80}Hg*
Balwinder Singh, Anil Kumar and **Sanjiv Puri**
Proc. AMRP-2020, (2020) 125
61. *Study of Energy Shift in $L_{\gamma 1}$ X-ray Emission Lines of Thallium Complexes*
Harpreet Singh Kainth, **Sanjiv Puri** and Deeksha Khandewal

62. *Experimentally Revisited X-ray Fundamental Parameters at XRF beamline of Elettra Sincrotrone, Trieste*
A. G. Karydas, Vibha Ayri, Sandeep Kaur, M. Czyzycki, Giuliana Aquilanti, A. Migliori and **Sanjiv Puri**
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<https://www.uantwerpen.be/en/conferences/exrs/2023>.
63. *Influence of cascade vacancy decay on the average M-shell Fluorescence Yield for Rhenium*
Vibha Ayri, Mateusz Czyzycki, Anil Kumar, Andreas Karydas, **Sanjiv Puri**
European conference on X-ray analysis (EXRS-2022), held in Bruges, Belgium during 26 June to 1 July 2022
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64. *M X-ray production cross-sections in $_{81}\text{Pb}$ and $_{83}\text{Bi}$ induced by nitrogen ions.*
Balwinder Singh, Shehla, Anil Kumar, Deepak Swami, Ajay Kumar and **Sanjiv Puri**
7th International Conference on Ion beams in Materials Engineering and Characterization (7-IBMEC), at Inter University Accelerator Centre (IUAC), New Delhi on 16 - 19 November, 2022.
65. *Measurements of Line Resolved M-shell X-ray Production Cross Sections for $_{79}\text{Au}$ and $_{81}\text{Tl}$ by N^{9+} Ion Beam.*
Balwinder Singh, Shehla, Anil Kumar, Deepak Swami, Ajay Kumar and **Sanjiv Puri**
NAARRI International Conference NICSTAR-2023 held at Lulu Bolgatty International Convention Center (LBICC), Kochi, Kerala, India, on January 09-12, 2023.
66. *L-shell Average Fluorescence Yield for $_{75}\text{Re}$ using Synchrotron Raditation.*
Vibha Ayri, Sandeep Kaur, Anil Kumar, M. Czyzycki, A.G. Karydas and **Sanjiv Puri**
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67. *Synchrotron Radiation Induced L X-ray Intensity Ratios for $_{72}\text{Hf}$.*
Harpreet Singh, Vibha Ayri, H. S. Kainth, A.G. Karydas and **Sanjiv Puri**,
NAARRI International Conference NICSTAR-2023 at Lulu Bolgatty International Convention Center (LBICC), Kochi, Kerala, India, on January 09-12, 2023.
68. *Influence of Multiple Ionization on M-shell Fluorescence and Coster-Kronig Yields of $_{79}\text{Au}$ and $_{83}\text{Bi}$ for Carbon Ion Impact,*
Balwinder Singh and **Sanjiv Puri**
23rd National Conference on “Atomic and Molecular Physics” at IIST, Trivandrum, Kerala, India, on February 20-23, 2023.
69. *Influence of Multiple Ionization on M-shell Fluorescence and Coster-Kronig Yields of $_{70}\text{Yb}$ for Nitrogen Ion Impact,*
Balwinder Singh and **Sanjiv Puri**,
One Day National Seminar on Condensed Matter Physics and Materials at Punjabi University, Patiala, Punjab, India on 8th May.
70. *Measurements of L X-ray Branching Ratios for $_{75}\text{Re}$ at Incident Photon Energies across its $L_i(i=1-3)$ Edge Energies.*
Vibha Ayri, Sandeep Kaur, Harpreet Singh, Anil Kumar, M. Czyzycki, A.G. Karydas and **Sanjiv Puri** One Day National Seminar on Condensed Matter Physics and Materials at Punjabi University, Patiala, Punjab, India on 8th May.
71. *Measurements of Mass-Attenuation Coefficients for $_{51}\text{Sb}$ at Photon Energies across its L_3 Sub-Shell Absorption Edge.*
Sandeep Kaur, Vibha Ayri, Anil Kumar, M. Czyzycki, A.G. Karydas and **Sanjiv Puri**.
One Day National Seminar on Condensed Matter Physics and Materials at Punjabi University, Patiala, Punjab, India on 8th May.
72. *Study of Multiple Ionization Effects on Nitrogen Ion Induced M X-Ray Emission for $_{82}\text{Pb}$ and $_{83}\text{Bi}$,*
Balwinder Singh and **Sanjiv Puri**
6th National Conference on Advanced Materials and Radiation Physics (AMRP-2023) at SLIET Longowal, Punjab, India, on 18-19 May.
73. *$M_j(j=1-5)$ Sub-shell Vacancy Distribution Produced Following Decay of $L_i(i=1-3)$ Subshell Vacancies,* Vibha Ayri, Sandeep Kaur, Anil Kumar, M. Czyzycki, A.G. Karydas and **Sanjiv Puri**

6th National Conference on Advanced Materials and Radition Physics (AMRP-2023) at SLIET Longowal, Punjab, India, on 18-19 May.

74. *Measurements of LM Resonant Raman Scattering Cross Sections for Sn using Synchrotron Radiation.*

Sandeep Kaur, Vibha Ayri, Anil Kumar, M. Czyzycki, A.G. Karydas and **Sanjiv Puri**

6th National Conference on Advanced Materials and Radition Physics (AMRP-2023) at SLIET Longowal, Punjab, India, on 18-19 May.

75. *Average fluorescence yields for $_{50}\text{Sn}$ and $_{51}\text{Sb}$.*

Anil Kumar, Vibha Ayri, Sandeep Kaur, M. Czyzycki, A. G. Karydas and **Sanjiv Puri**.

6th National Conference on Advanced Materials and Radition Physics (AMRP-2023) at SLIET Longowal, Punjab, India, on 18-19 May.

76. *Measurements of $_{72}\text{Hf}$ L₃-subshell fluorescence yield using synchrotron radiation.*

Harpreet Singh, Vibha Ayri, A. G. Karydas and **Sanjiv Puri**.

6th National Conference on Advanced Materials and Radition Physics (AMRP-2023) at SLIET Longowal, Punjab, India, on 18-19 May.

(XIV) **Symposia/workshops and Orientation /Refresher courses/Summer Schools attended:**

(a) ***Symposia/Conferences/workshops attended***

(i) **National**

- (1) *National workshop* on Atomic physics with high energy heavy ions held at Banaras Hindu University, Varanasi from April 18-20, 1994.
- (2) *National Symposium* on radiation physics (NSRP-11) held at Punjabi University, Patiala from 26-29 Oct., 1995.
- (3) *National workshop* on “Regional PIXE Facility” sponsored by DST, N.Delhi, held at Panjab University, Chandigarh in Sept., 1999.
- (4) *National Seminar* on “Material Science: Trends and Future” MSTF-2000 held at SLIET, Longowal, Sangrur (Distt.) on 24-25 Feb., 2000.
- (5) *National workshop* on “15 UD pelletron facility at Chandigarh” sponsored by DST, N.Delhi, held at Panjab University, Chandigarh in July, 2000.
- (6) *National seminar* on “Computational techniques in physics” held at department of physics Panjab University, Chandigarh on 6-7 March, 2002.
- (7) *Punjab Science Congress* of the Punjab Academy of Sciences held at SLIET, Longowal from 7-9 Feb., 2003.
- (8) *National symposium* on Radiation measurements and applications (NSRMA) held at Punjabi University, Patiala during Nov., 2004.
- (9) *National conference* on “Lasers, smart materials and radiation physics” (LSRP-2006) held at SLIET, Longowal during March 17-18, 2006.
- (10) *Symposium* on “Radiation Sources, Detection and Applications” (SRSDA07) held at Punjabi University, Patiala during Feb. 5-6, 2007.
- (11) *National Symposium* on “Radiation and Materials” (NSRM08) held at department of Physics, Punjabi University, Patiala during March 10-11, 2008.
- (12) Attended *National Conference* on “Advanced Materials and Radiation Physics (AMRP09)” held at SLIET, Longowal during March 09-10, 2009.
- (13) Attended Indian Nuclear Society *National Seminar* on “Nuclear Technology for Sustainable development” (NTSD-09) held at Thapar University, Patiala during October 10-11, 2009.
- (14) Attended *National conference* on “X-ray fluorescence 2010” (XRF2010) held at Saha Institute of Nuclear Physics (SINP), Kolkata during 12-15 Jan., 2010.
- (15) Attended *National Symposium* on “Radiation Physics and Nanomaterials” (NSRPN-11) held at Department of Physics, Punjabi University, Patiala during Feb. 4-5, 2011.
- (16) Attended 14th Punjab Science Congress (PSC-14) held at SLIET, Longowal during Feb. 7-9, 2011.

- (17) Attended National Conference on “Advanced Materials and Radiation Physics (AMRP-11)” held at SLIET, Longowal during Nov. 4-5, 2011.
- (18) Attended International Conference on Emerging Trends in Physics for Environmental monitoring and management (ETPEMM-12) held at Department of Physics, Punjabi University, Patiala during Dec. 17-19, 2012.
- (19) Attended 3rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013) held at SLIET, Longowal during Nov., 22-23, 2013.
- (20) Attended 4th National Conference on Advanced Materials and Radiation Physics (AMRP-2015) held at SLIET, Longowal during March 13-14, 2015.
- (21) Attended 5th National e-Conference on “Advanced Materials and Radiation Physics (AMRP-2020)” held at SLIET, Longowal during Nov. 9-11, 2020.
- (22) Attended 6th National Conference on “Advanced Materials and Radiation Physics (AMRP-2023)” held at SLIET, Longowal during May 18-19, 2023.
- (23) Attended National Seminar cum workshop on "Recent trends in Basic and Applied Nuclear Physics" held at Panjab University, Chandigarh during 22-23 November, 2023.

(ii) International

Attended INDO-US workshop on “New Directions in the study of interactions of Energetic photons with matter” sponsored by DST, India and NSF, USA held at University of North Bengal, Darjeeling from 22-27 March, 2004.

(b) International Summer School attended:

One month summer school on “Synchrotron Radiations” held at *The Abdus Salam International Center for Theoretical Physics, Trieste, Italy* during 19 April-22 May, 1999.

(c) Orientation /Refresher/short-term courses attended:

- (1) Orientation course at Academic staff college, Panjab University, Chandigarh in Dec., 1996.
- (2) Two Refresher courses in **Physics** held at Panjab University, Chandigarh in July, 1998 and June, 2001, respectively.
- (3) Short term course on “Optical fiber and its applications” held at NITTTI, Sec-26, Chandigarh during Jan., 2004.
- (4) Short term course on “Lasers and its applications” held at NITTTI, Sec-26, Chandigarh during June, 2004.
- (5) Short term course on “Nanoparticles and their applications” held at NITTTR, Chandigarh from Nov., 2007.

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Sanjiv Puri