

CV of Prof. B.L. Ahuja

1. Full Name in English: **Dr. BABU LAL AHUJA**

Full Name in Hindi: डॉ. बाबू लाल आहुजा

2. Short Name: **Dr. B.L. Ahuja**

3. Father's Name: **Ramlal Ahuja**

4. Date of Birth: **08-07-1961**

5. Present address:

3A/E, New Keshav Nagar

Roop Sagar Road, Udaipur 313001 (Raj.), India

6. Permanent address:

3A/E, New Keshav Nagar

Roop Sagar Road, Udaipur 313001 (Raj.), India

7. Present/Last position held with full address:

(a) **Emeritus–Scientist (CSIR)**

(b) **Director (H), Institute of Engineering and Technology (AICTE Approved) MLSU, Udaipur**

(c) **Former Professor of Physics (14 years of experience)**

(d) **Former Chairman, Faculty of Engineering**

(e) **Former Director, Research**

(f) **Former Chairman, Faculty of Science**

(g) **Former, Dean, PG Studies**

(h) **Former Dean, University College of Science**

(i) **Former Head, Department of Physics**

(j) **Former Director, University Computer Centre**

(k) **Former Officiating Vice-Chancellor, MLSU, Udaipur**

Address: ML Sukhadia University, Udaipur (Raj.)

8. Telephone (with STD code): 9414317048 (Mobile)

9. Email: blahuja@yahoo.com

10. Website, if any: www.mlsu.ac.in (Physics Department)

11. Summary about the applicant:

♣ *At present, working as Emeritus–Scientist (CSIR, New Delhi funded) in Mohanlal Sukhadia University, Udaipur.*

♣ *Worked as Professor for 14 years.*

♣ *Field of specialization: Condensed Matter Physics, Engineering of Materials for Solar Energy, etc.*



- ♣ **Post-Doc work (BOYSCAST fellowship 1992-93 by DST, New Delhi)** to work at University of Warwick, U.K. for development of instrumentation for synchrotron radiations and also Paris University, France and SPring-8, Japan, etc.
- ♣ **First Indian Scientist** to develop first-ever 20 Ci ^{137}Cs Compton spectrometer.
- ♣ **First-ever Scientist** to develop first-ever 100 mCi ^{241}Am Compton spectrometer.
- ♣ **First Indian Scientist** to work on high resolution Compton spectrometer.
- ♣ **First Indian Scientist** to undertake magnetic Compton profile measurements.
- ♣ **Developed γ -ray environmental set-up and band structure laboratory.**
- ♣ **As Administrator in MLS University:**
 - a) Director (H), Institute of Engineering and Technology (Founder Director), MLSU, Udaipur (Established AICTE approved Engineering Institute in MLSU as Founder Director)
 - b) Former Director, Research
 - c) Former Chairman, Faculty of Engineering
 - d) Former Chairman, Faculty of Science
 - e) Former, Dean, PG Studies
 - f) Former Dean, University College of Science
 - g) Former Head, Department of Physics
 - h) Former Director, University Computer Centre
 - i) Former Officiating Vice-Chancellor, MLSU, Udaipur
- ♣ **Member of National Committees for research funding:**
 - a) Programme Advisory Committee (PAC), National Science and Technology Management Information System (NSTMIS), DST-New Delhi (2019-2022 & 2022-2025).
 - b) WOS-A Expert Committee to sanction the Research Grant to Women Scientists and Expert Member of DST, New Delhi
 - c) Expert DST- Young Scientist Committee on Physical and Mathematical Sciences
- ♣ **International Academic Collaboration: 17**
- ♣ **National Academic Collaboration: 17**
- ♣ **PhD supervised: 32** (1 Electrical Engineering, MNIT, Jaipur + 29 Physics + 2 Computer Science).
- ♣ **Major R&D projects 20** funded by RUSA, DST, CSIR, UGC, AICTE, UGC-DAE-CSR, BRNS and DRDO, etc.
- ♣ **Research Publications: 178** in peer reviewed very reputed international journals (highest impact factor up to **24.31** and average impact factor about 3) and about 203 publications in conference proceedings, etc. **Books 3. Scopus Citations 1925 and h-index 22.**
- ♣ **Reviewer of several topmost international journals** (like Nature, Wiley Journals, PRB, PRL, APL, Elsevier journals) and is associated with many scientific societies in different capacities.

12. (a) Academic qualifications (beginning from the first degree received):

Holder of National Merit Scholarship from Hr. Sec to B.Sc. (from University of Rajasthan)

S. No.	Degree/ Course	Year	Name of the University	Remarks if any
1	Secondary	1977	Rajasthan Board of Secondary Education, Ajmer	National merit scholarship holder
2	Hr. Secondary	1978	Rajasthan Board of Secondary Education, Ajmer	National merit scholarship holder continues

3	B.Sc.	1981	University of Rajasthan, Jaipur	National merit scholarship holder continues
4	M.Sc.	1983	University of Rajasthan, Jaipur	Physics
5	Computer Certificate course	1986	University of Rajasthan, Jaipur	
6	Ph.D.	1988	University of Rajasthan, Jaipur	Science Field: Compton scattering

12. (b) Post-Doctoral/Training Experience including academic visits abroad:

S. No.	Duration		Institution	Designation	Nature of Work	Remarks if any
1	5/11/1992	3/11/1993 (on leave from MREC)	Worked at Univ. of Warwick, Coventry, U.K.	Post-Doctoral (Visiting Fellow) BOYSCAST Scheme of DST, New Delhi	Synchrotron radiations and instruments developments	First such fellowship in Rajasthan state
2	Jan. 18, 2012	Jan. 25, 2012	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Observation of temperature dependent orbital degree of freedom of a transition metal (T) doped $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-x}\text{T}_x\text{O}_3$ manganites by magnetic Compton Scattering. (Experimental work)	
3	July 18, 2010	July 23, 2010	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	A study of gigantic change in magnetic transitions in bulk and thin films of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ manganite by magnetic Compton scattering (Experimental work)	
4	Feb. 17, 2010	Feb. 23, 2010	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Study of metal-insulator transition in Ni doped perovskites	

					LaFeO ₃ and PrFeO ₃ using magnetic Compton scattering (Experimental work)	
5	Feb. 12, 2009	Feb. 17, 2009	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Origin of magnetism in multiferroic materials using Compton scattering. (Experimental work)	
6	Feb. 2, 2008	Feb. 7, 2008	SPring-8, Hyogo, Japan	Visiting Scientist	Origin of martensitic transition and ferromagnetism in shape memory alloy Mn ₂ NiGa using magnetic Compton scattering (Experimental work)	
7	July 6, 2006	July 9, 2006	Institute of High Performance Computing, Singapore	Visiting Scientist	FP-LAPW code for band structure calculations (Theoretical work)	
8	Nov. 26, 2005	Nov. 28, 2005	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic moments in Ni ₂ MnGa: A magnetic Compton study (Experimental work)	
9	May 26, 2003	May 30, 2003	SPring-8, Hyogo, Japan	Visiting Scientist	Study of magnetic instability in CeF ₂ on substitution of Ir/Ru magnetic Compton scattering (Experimental work)	
10	April 3, 2002	April 10, 2002	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic Compton profiles of fcc Co in high	

					temperature phase and fcc $\text{Fe}_{50}\text{Ni}_{50}$ (Experimental work)	
11	June 4, 1999	June 14, 1999	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic Compton profiles of CeF_2 and CeRu_2 based compounds: phase I (Experimental work)	
12	Dec. 9, 1997	Dec. 18, 1997	European Synchrotron Radiation Facility (ESRF), Grenoble, France	Visiting Scientist	High resolution Compton scattering study of $\text{Nb}_{0.50}\text{Mo}_{0.50}$ (Experimental work)	
13	May, 1997	Nov. 1997	European Synchrotron Radiation Facility (ESRF), Grenoble, France	Visiting Scientist	To measure magnetic Compton profiles (Pd-Co system) and high resolution Compton profiles (Nb and Nb-Mo) (Experimental work)	
14	March, 1996	April 1996	KEK, Japan	Visiting Scientist	Low angle x-ray scattering (Experimental work)	
15	1993		Daresbury (Synchrotron)	Visiting Scientist	Storage Ring and magnetic Compton scattering (Experimental work)	
16	May, 1993	June, 1993	Universite de Paris-sud (LURE), France	Visiting Scientist	Synchrotron radiation based Compton scattering experiments (Experimental work)	
17	March, 1993	April 1993	Universite de Paris-sud	Visiting Scientist	Synchrotron radiation based	

			(LURE), France		Compton scattering experiments (Experimental work)	
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13. (a) Teaching experience:

S.No.	Position	Duration		Total Duration in years	Remarks if any
		From	To		
1	Lecturer (Ad-hoc)	19.1.1984	5.5.1984		Govt. College, Kotputli
2	Lecturer (Ad-hoc)	17.7.1984	8.9.1984		Govt. College, Nagaur
3	Asstt. Prof. (Ad-hoc)	17.7.1987	26.4.1988	About 1 year	Univ. of Jodhpur, Jodhpur
4	Asstt. Prof. (Ad-hoc)	30.7.1988	20.9.1988		M L Sukhadia University, Udaipur
5	Asstt. Prof. (Ad-hoc)	21.9.1988	31.10.1989	About 1 year	University of Rajasthan, Jaipur
6	Post-Doctoral (Visiting Fellow) BOYSCAST Scheme of DST, New Delhi	5.11.1992 (on leave from MREC)	3.11.1993	1 year	Worked at Univ. of Warwick, Coventry, U.K.
7	Lecturer (permanent)	1.11.1989	20.8.1997	7 years 9 months	M. Regional Engg. College, Jaipur (Presently MNIT)
8	Associate Professor	21.8.1997	16.5.2007	9 years 8 months	M L Sukhadia Univ., Udaipur
9	Professor of Physics	17.5.2007	31/7/2021	13 years 11 months	M L Sukhadia Univ., Udaipur (under CAS)

13. (b) Participation and contribution in relevant areas in higher education

	Organization	Area of specialization
Visiting Fellow DST	University of Warwick, UK, under Boyscast Fellowship of Govt. of India (5/11/1992 to 3/11/1993)	Synchrotron radiations and instruments developments
Resource Person	In several Refresher Courses conducted by different Universities, in conferences, etc.	Physics, Environmental Sciences

Invited talks/Keynote speaker	In several National/International Conferences.	
Others (Specify)	Teaching M.Sc. students and supervising Ph.D. students and many more as mentioned in this bio-data	

Seminars, Conferences, Workshops attended/organized: 85

S. No.	Name of the Seminar/Conference/Symposium/Workshop, etc.	Name of the Sponsoring Agency	Title of talk and date
1	DFT investigation of electronic structure using Quantum Espresso and BURAI softwares	IIS (Deemed to be University) Jaipur	Invited Talk on “Using Wien2k: Electronic structure studies of materials” on 15 Feb. 2022
2	Ph.D. Supervisors of GGTU	Govind Guru Tribal University, Banswara	Invited Talk on “Emerging Trends in Research” on 20/4/2022
3	19 th Refresher Course in Physical Sciences and NS.	JNU, New Delhi	Invited Talk on “Inelastic scattering to probe electronic and magnetic properties of materials” on 4 th Jan 2022
4	Exploring the Properties of Materials at Nanoscale	Department of Physics, Patna Women College, Patna and Sophia Girls College, Ajmer	Invited Talk on “Utility of Compton spectroscopy in exploring the electronic and magnetic response of functional materials” on 9-10 July, 2021
5	Advances in Materials Science 2021	University of Kota, Kota	Invited Talk on “Compton scattering: A traditional technique with advance application” on 31 July, 2021
6	Webinar on Thesis Writing	Govind Guru Tribal University, Banswara	Invited Talk on “Thesis writing” on 22/7/2021
7	Ph.D. course work	Mohanlal Sukhadia University, Udaipur	Invited Lecture on “Design of Instrument” on 18/6/2021

8	5 th National e-Conference on Advanced Materials and Radiation Physics (AMRP-2020)	Sant Longowal Institute of Engineering and Technology, Longowal, Punjab	Invited Talk on “Utility of Compton spectroscopy in exploring electronic and magnetic response of functional materials” 9-11 November, 2020
19	UGC Sponsored 1 st Online Refresher Course in Physics	Gujarat University, Ahmedabad	Invited Talk on “Compton scattering: An old technique with new potentials” 15/9/2020
10	Mata Gujari College, Shri Fatahgarh Shib, Punjab	Mata Gujari College, Shri Fatahgarh Shib, Punjab	Invited Talk on “Compton scattering: An old technique with new promises” 18/2/2020
11	National Conference on Recent Advancement in Physical Sciences (NCRAPS-2019)	National Institute of Technology, Uttarakhand	Invited Talk on “Compton spectroscopy and electronic response of functional materials” 19 December, 2019
12	Short Term Course on Material Science & Engineering (Under TEQIP-III)	Women Engineering College, Nasirabad Road, Makhapura, Ajmer	Invited Talk on “Compton scattering: An old technique with new promises” December 11, 2019
13	VII Rajasthan Science Congress- 2019	University College of Science, MLS, Udaipur	Invited Talk on “Compton spectroscopy: A probe to explore electronic and magnetic response of functional materials” 15 October, 2019
14	National Conference on Recent Advances in Material Science and Technology (NCRAMST-2019)	Deptt. of Physics, University of Rajasthan, Jaipur	Invited Talk on “Use of Compton spectroscopy in deducing the electronic and magnetic properties” February 4-5, 2019.
15	Workshop on Research Methodology	Mohanlal Sukhadia University, Udaipur	Invited Talk on “What is research?” January 5, 2019
16	INSPIRE Internship Camp	Aishwarya College of Education Sansthan, Udaipur & Department of Science and Technology, New Delhi	Invited Talk on “Radiation and their interaction with matter” October 5, 2017
17	International Conference on Functional Oxides and Nanomaterials (ICFONM-	Saurashtra University, Rajkot	Invited Talk on “Magnetic Compton

	2016)		scattering: A unique tool to probe spin moments in functional oxides” November 12, 2016
18	12 th National Symposium on Nuclear and Radiochemistry (NUCAR-2015)	Bhabha Atomic Research Centre (BARC), Mumbai	Invited Talk on “Sensitivity of Compton scattering to electronic and magnetic properties of materials” February 9-13, 2015
19	National Conference on Materials Science (NCMS-2014)	Mewar University, Chittorgarh	Invited Talk on “On the development and applicability of Compton spectrometers” October 17-18, 2014
20	V th Symposium on Nuclear Analytic Chemistry	Bhabha Atomic Research Center, Mumbai	Invited Talk on “Compton scattering and its applications: Current status and future prospects” Jan. 20-24, 2014
21	3 rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013)	Organized by Department of Physics, Sant Longowal Institute of Engineering and Technology, Longowal (Punjab)	Invited Talk on “Electronic properties of functional materials using Compton scattering” November 22-25, 2013
22	University Lecture Series	Shri Mata Vaishno Devi University, Katra (J & K)	Invited Talk on “Inelastic gamma-ray scattering with new promises” September 3-7, 2013
23	19 th ISCB International Conference	Organized by Indian Society of Chemists and Biologists and ML Sukhadia University, Udaipur	Invited Talk on “Use of Compton scattering in characterization of technologically important compounds” March 2.-5, 2013
24	National Conference on Recent Advances in Materials and Devices	Hindu College, Sonapat, Haryana	Invited Talk on “Spin dependent inelastic scattering to investigate magnetic properties” Feb. 27-28, 2013
25	57 th DAE Solid State Physics Symposium	IIT Bombay, Mumbai	Invited Talk on “Magnetic Compton scattering: A reliable probe to investigate magnetic properties” Dec. 3-7, 2012
26	Scientific Applications of the IUAC HPC facility	Inter University Accelerator Centre,	Invited Talk on “Validation of electronic

		New Delhi	structure calculations using Compton scattering technique” Nov. 22-23, 2012
27	39 th BSC-BRNS Meeting	Board of Research in Nuclear Sciences, Mumbai	M.L. Sukhadia University, Udaipur (Raj.) Sept. 6-8, 2012
28	DST-PAC Meeting on Condensed Matter Physics and Material Sciences	Department of Science and Technology, New Delhi	Inter University Accelerator Centre, New Delhi, July 30, 2012
29	Training Programme on Research Methodologies-2012	ML Sukhadia University, Udaipur	Invited Talk on “How to prepare research projects” April 21-27, 2012
30	National Symposium on Advances in Materials Science and Technology	Deptt. of Physics University School of Sciences, Gujarat University Ahmedabad	Invited Talk on “Magnetic Compton spectroscopy: A reliable probe to study the magnetic properties of ferromagnetic materials”
31	2 nd National Conference on Advanced Materials and Radiation Physics	Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab	Invited Talk on “Magnetic Compton Scattering: A Unique Probe To Measure Spin Moments”
32	First International Conference on Road Safety Vision-2020 (ICRSV-2020)	M.L. Sukhadia University, Udaipur (Raj.); All India Federation of Motor Vehicles Department Technical Officer’s Association & Transport Department, Govt. of Rajasthan	M.L. Sukhadia University, Udaipur (Raj.) May 21-22, 2011 (Convener of the Conference)
33	Workshop on Public Awareness on Radiation	Department of Physics, M.L. Sukhadia University, Udaipur (Raj.)	Department of Physics, M.L. Sukhadia University, Udaipur (Raj.) March 22, 2011 (Convener of the Workshop)
34	International Conference of Magnetic Materials (ICMM-2010)	Saha Institute of Nuclear Physics, Kolkata	Saha Institute of Nuclear Physics, Kolkata Oct. 25-29, 2010
35	18 th National Symposium on Radiation Physics	Indian Society for Radiation Physics, Mumbai	M.L. Sukhadia University, Udaipur (Convener of the Symposium) Nov. 19-21, 2009, Also

			Invited Talk
36	Workshop of Nanostructured materials	Deptt. of Physics, M.L. Sukhadia University, Udaipur	Invited talk on “Band structure calculations and Compton profile studies” at M.L. Sukhadia University, Udaipur, Oct, 2009
37	Meeting on Nanoscience with nano-sized high energy photon beam	JNCASR, Bangalore	JNCASR, Bangalore September 2008
38	Workshop on MNIT Syllabi and Course Structure	Deptt. of Physics, MNIT Jaipur	MNIT Jaipur 24.6.08
39	I. A. Patel (Shertha) Memorial Lecture series	Deptt. of Physics, Sardar Patel Univ., Vallabh Vidhya Nagar, Gujarat	Invited talk on “Compton scattering: A probe for verification of band structure calculations”, at S. Patel Univ., Vallabh Vidhya Nagar, December, 2007
40	Awareness Workshop on Low Temperature and High Magnetic Field Facilities at CSR, Indore	IUC, Indore	IUC, Indore December, 2007
41	International Conference on Ferromagnetic Shape Memory Alloys 2007	S N Bose National Centre for Basic Sciences, Kolkata	Invited talk on “Compton scattering study of shape memory alloys” at S N Bose National Centre for Basic Sciences, Kolkata, India in November 2007
42	17 th National Symposium on Radiation Physics (NSRP-17)	Indian Society for Radiation Physics, Mumbai	Invited talk on “Electronic structure of metals and alloys using Compton profiles” at Saha Institute of Nuclear Physics, Kolkata in November 2007.
43	14 th WIEN2K – Workshop	Institute of High Performance Computing, Singapore	Talk at Institute of High Performance Computing, Singapore (2007) on “Compton scattering: A reliable probe for verification of band structure calculations”.
44	Symposium on Radiation Sources, Detection and Applications (SRSDA07)	Indian Society for Radiation Physics, Mumbai	Invited Talk at Department of Physics, Punjabi University, Patiala on “Role of

			Compton profiles in the verification of band structure calculations” on 5.2.07
45	SAGAMORE XV International Conference on Electron Charge, Spin and Momentum Densities	University of Warwick, U.K.	Talk at University of Warwick, Coventry, UK on “Magnetic Compton scattering study of first order magnetic transition in Ir doped CeFe ₂ ”, August 13-18, 2006
46	Conference on Akhil Bhartiya Rajbhasha Takniki Sangoshthi	Defense Research & Development Organization (DRDO)	Solid State Physics Lab., New Delhi on 29.03.2005 (Invited talk)
47	DST-PAC Meeting on Condensed Matter Physics and Material Sciences	Department of Science and Technology, New Delhi	University of Mysore, Mysore, Jan. 27-29, 2005
48	DST-PAC Meeting on Condensed Matter Physics and Material Science	Department of Science and Technology, New Delhi	M. L. Sukhadia Univ. Udaipur (Local Convener of the PAC Meeting) September 30 – October 1, 2004
49	DST-PAC Meeting on Condensed Matter Physics and Material Sciences	Department of Science and Technology, New Delhi	Indian Institute of Technology, Bombay, May 2004
50	Refresher Course in Chemistry	University Grants Commission, New Delhi	Mohan Lal Sukhadia University, Udaipur, Jan. 2004 (Resource Person – one talk)
51	Round Table Conference on Globalisation-Challenges for Canada and India with Special Reference to WTO	Govt. of Rajasthan	HCM, RIPA, Udaipur, July 20, 2004
52	Refresher Course in Environmental Sciences	University Grants Commission, New Delhi	Mohan Lal Sukhadia University, Udaipur, Dec. 2003 (Resource person – one talk)
53	XIX National Convention of Environmental Engineering	Hindusthan Zinc Limited, Udaipur	The Institute of Engineering, Udaipur, Oct. 16-18, 2003
54	Refresher Course in Physics	University Grants Commission, New Delhi	Mohan Lal Sukhadia University, Udaipur, July 15 to Aug. 03, 2002 (Resource person and responsible for one week

			activities)
55	Seminar on Application of Nuclear Techniques in Science Teaching	University Grants Commission, Bhopal	University Maharaja's College, Jaipur, Sept. 28-29, 2002 (Invited talk)
56	11 th National Symposium on Environment (NSE-11)	Board of Research in Nuclear Sciences, Department of Atomic Energy, Mumbai	Rajasthan College of Agriculture, MP Univ., Udaipur; Rajasthan Atomic Power Station, Kota; Health, Safety & Environment Group, BARC, Mumbai, June 5-7, 2002
57	DAE Solid State Physics Symposium	Department of Atomic Energy (DAE), Government of India, Mumbai	BARC, Mumbai, Dec. 26-30, 2001
58	Refresher Course in Physics	University Grants Commission, New Delhi	Mohan Lal Sukhadia University, Udaipur, Oct. 20 to Nov. 10, 2001 (Resource person and responsible for one week activities)
59	DAE Solid State Physics Symposium	Department of Atomic Energy (DAE), Government of India, Mumbai	Guru Ghansi Das University, Bilaspur, C.G., Dec. 27-31, 2000
60	XII National Conference on Atomic and Molecular Physics	Govt. of India and MLSU	M. L. Sukhadia Univ., Udaipur, Dec. 29, 1998 to Jan. 2, 1999 (ORGANISING SECRETARY)
61	7 th International Symposium on Radiation Physics (ISRP-7)	Various funding agencies, Govt. of India	University of Rajasthan, Jaipur, Feb. 24-28, 1997 (Member, Organising Committee)
62	26 th Annual Convention on Technical Education: Prescription, Assessment and Control of Quality and Development Policy	Indian Society for Technical Education, Malaviya Regional Engineering College, Jaipur	Malaviya Regional Engineering College, Jaipur, Jan. 4-6, 1997 (RAPPORTEUR)
63	School on Science with Synchrotron Radiation & Indo-Japanese Meeting on SPring-8 Utilisation	DAE, Mumbai; CAT, Indore; BARC, Mumbai; DST, New Delhi	IUC-DAEF, Indore, Nov. 25-27, 1996
64	UNU-KEK PG Course on Synchrotron Radiations	The United Nations University, Tokyo and National	The United Nations University, Tokyo and National Laboratory for

		Laboratory for High Energy Physics (KEK) Tsukuba, Japan	High Energy Physics (KEK) Tsukuba, Japan, March 25 to April 10, 1996
65	Meeting of AICTE Review of MHRD Funded Projects	Govt. of India	Indian Institute of Technology, New Delhi, Dec. 15, 1996
66	Seminar and Discussion Meeting on Laser Spectroscopy Applications	Govt. of India	Indian Institute of Technology, New Delhi, Jan. 20-21, 1995
67	DAE Solid State Physics Symposium	Department of Atomic Energy (DAE), Government of India, Mumbai	University of Rajasthan, Jaipur, Dec. 27-31, 1994
68	National Seminar on Disordered Materials	Govt. of India	University of Rajasthan, Jaipur, Oct. 24-26, 1994 (Member of Organising Committee)
69	81 st Session of Indian Science Congress	Govt. of India	University of Rajasthan, Jaipur, Jan. 3-8, 1994 (Member of Science Exhibition Committee) Specially invited by DST to speak on "Science in India and International Co-operation" during Young Scientist Session
70	Euro conference on Dynamic Properties of Condensed Matter	European Community; University of Patras; General Secretariat for Research and Technology, Greece	University of Patras, Greece, Sept. 21-26, 1993
71	Storage Ring Source Users Meeting	University of Warwick, U.K.	Daresbury, U. K., 1993
72	Conference on Condensed Matter and Material Physics	University of Warwick, U.K.	University of Sheffield, U.K., Dec. 15-17, 1992
73	23 rd National Seminar on Crystallography	Govt. of India	M. Regional Engg. College, Jaipur, Feb. 20-22, 1992 (Organising Secretary)
74	DAE Solid State Physics Symposium	Department of Atomic Energy, Government of India, Mumbai	Deptt. of Physics, BHU, U.P., Dec. 21-24, 1991
75	International Workshop on Crystal Growth of Technologically Important Materials for Device Applications	Govt. of India	Anna University, Madras, Nov. 8-15, 1991
76	Workshop on DST funded Young Scientist Projects	Department of Science & Technology (DST), New Delhi	Indian Institute of Technology, Kanpur, Sept. 1991

77	ISTE Summer School on Crystal Growth and Characterisation of Technologically Important Crystals for Device Applications	Govt. of India	Anna University, Madras, June 5-18, 1991
78	DAE Solid State Physics Symposium	Department of Atomic Energy, Government of India, Mumbai	BARC, Mumbai, Jan. 1-4, 1991
79	Third National Conference on Positron Annihilation and Compton Scattering	Various funding agencies, Govt. of India	University of Rajasthan, Jaipur, Jan. 17-20, 1990 (Member of National and Local Organizing Committees)
80	Refresher Course on Solid State Physics	University Grants Commission, New Delhi	Deptt. of Physics, University of Rajasthan, Jaipur, 1989 (Resource Person)
81	National Conference on Disordered Material	Various funding agencies, Govt. of India	University of Rajasthan, Jaipur, Oct. 18-21, 1989 (Member of Organizing Committee)
82	Refresher Course on Condensed Matter Physics	University Grants Commission, New Delhi	Deptt. of Physics, University of Rajasthan, Jaipur, March 27 to April 15, 1989 (Resource Person)
83	DAE Solid State Physics Symposium	Department of Atomic Energy, Government of India, Mumbai	Deptt. of Physics, Agri. Univ., Pantnagar, U.P., Dec. 20-23, 1986
84	Symposium on Current Trends in the Physics of Materials	Indian Institute of Technology, Kanpur	Indian Institute of Technology, Kanpur, Nov. 5-8, 1986
85	Meeting of National Academy of Sciences	National Academy of Sciences, India	University of Rajasthan, Jaipur, Oct. 25-27, 1986

13. (c) Involvement with formulation of academic programmes:

S. No.	Nomenclature of Innovative Academic Programmes formulated	Date of approval by Academic Council	Year of Introduction
1.	Various M.Sc. Physics courses like Microwave Electronics, Radiation Physics, Mathematical Physics under CBCS scheme of UGC as adopted in MLSU, Udaipur	For example, 2015, 2010-2013	2011, 2015
2	As Faculty Chairman, w.e.f. 4/10/2016 to 3/10/2019 worked on formulation of courses related to UG and PG classes of Science Faculty in ML Sukhadia University, Udaipur	For example, during sessions 2016, 2017, 2018, 2019	Next academic session after getting them resolved by Academic Council

13. (d) Important MoUs formulated for academic collaborations:

S. No.	MoUs formulated	Name of Agencies/ Departments involved	Year of MoU
1	As Dean & Faculty Chairman, signed MoU between (a) MLSU and AIIMS, Jodhpur for PG Diploma Course in Entomology. (b) RNT College, Kapasan, ITM Pune and Mohanlal Sukhadia University, Udaipur for Environmental monitoring. (c) Department of Pharmacy, Mohanlal Sukhadia University and Monash University, Malaysia for Research Collaboration and Student Exchange.	(a) ML Sukhadia University & AIIMS, Jodhpur (b) RNT College, Kapasan, ITM Pune and Mohanlal Sukhadia University, Udaipur. (c) Department of Pharmacy, Mohanlal Sukhadia University and Monash University, Malaysia.	2017 2019 2019
2	Prof. B.L. Ahuja had developed working collaboration with different research groups in India/abroad to work in particular scientific problems and publication of data, as evident from the list of publications also.	1. University of Warwick, UK. 2. University of Warsaw (Bialystok), Poland 3. University of Helsinki, Finland 4. University of Bristol, UK 5. Universite Paris-sud, France 6. Northeastern University, USA 7. European Synchrotron Radiation Facility, France 8. Academy of Mining and Metallurgy, Poland 9. University of Portsmouth, UK 10. Gunma University, Japan 11. Himeji Institute of Technology, Japan 12. Japan Synchrotron Radiation Research Institute, Japan 13. University of Rajasthan, Jaipur 14. Centre for Advance Technology, Indore 15. Sardar Patel University, Vallabh-Vidyanagar 16. IUC-DAE, Indore 17. Feroze Gandhi College, Rae Bareli (U.P.) 18. Malviya National Institute of Technology, Jaipur 19. IIT, Kharagpur 20. University of Uppsala, Sweden 21. University of Kota, Kota 22. Michigan Technological University, USA 23. University of Goa, Goa 24. IIT, Guwahati 25. National Institute of Technology, Hamirpur 26. Govt. Women Engg. College, Ajmer 27. University of Tikrit, Iraq 28. University of Calicut, Kerala 29. Universite´ de Pau et des Pays de l’Adour, France 30. Bhabha Atomic Research Centre, Mumbai	No formal MoU needed.

		31. Dipartimento di Fisica, Universita degli Studi di Trento, Trento, Italy. 32. Manipal University, Jaipur 33. UM-DAE Centre for Excellence in Basic Sciences, Vidyanagari, Santacruz (E), Mumbai, India 34. NIT, Uttrakhand	
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13. (e) Position of Chairs:

S. No.	Name of Chair	Name of Agencies/ Departments involved	Period of holding the Chair
1	Head of Department	Department of Physics, MLSU, Udaipur	From 1/9/2010 to 1/9/2013 (3 years)
2	Director	University Computer Centre, MLSU, Udaipur	From 29/10/2014 to 10/11/2016 (2 years)
3	Associate Dean	University College of Science, MLSU, Udaipur	From 27/6/2014 to 31/12/2016 (2 years 6 months)
4	Dean	University College of Science, MLSU, Udaipur	From 1/1/2017 to 31/12/2019 (3 years)
5	Chairman, Faculty of Science	Mohanlal Sukhadia University, Udaipur	From 4/10/2016 to 3/10/2019 (3 years)
6	Director, Research	Mohanlal Sukhadia University, Udaipur	From 26/7/2018 to till date (appointed for three years)
7	Dean, PG Studies	Mohanlal Sukhadia University, Udaipur	From 11/7/2019 to 7/4/2021
8	Acting Vice-Chancellor	Mohanlal Sukhadia University, Udaipur	On August 21-22 and 24-29 and September 27-28, 2019
9	Founder Director	Institute of Engineering and Technology (AICTE approved) MLSU, Udaipur	From 23/3/2021 to 31/7/2021 From 3/6/2022 to Contd.

14. (a) Administrative Experience (viz. Dean /Director /HoD /Proctor /Warden /Superintendent /Registrar/IQAC, etc.):

S. No.	Name of Institution	Position Held	Task/ responsibilities assigned	Duration		Duration in year	Remarks if any
				From	To		
1	Institute of Engineering and Technology (AICTE approved) MLSU, Udaipur	Director	To establish Engineering Institute from scratch	23/3/2021 3/6/2022	31/7/2021 Contd.		Founder Director
2	Mohanlal Sukhadia University, Udaipur	Acting Vice-Chancellor	To look after routine work of University	21/8/2019 24/8/2019 27/9/2019	22/8/2019 29/8/2019 28/9/2019		Beside regular duties, conducted

							Student elections also
3	Mohanlal Sukhadia University, Udaipur	Dean, PG Studies	To coordinate research work in University	11/7/2019	7/4/2021	For 3 years	
4	Mohanlal Sukhadia University, Udaipur	Director, Research	To promote research work in University	26/7/2018	31/7/2021	For 3 years	
5	Mohanlal Sukhadia University, Udaipur	Dean	Dean of University College of Science (Academic and administrative work to run the Science Faculty)	1/1/2017	31/12/2019	3 years	
6	Mohanlal Sukhadia University, Udaipur	Chairman, Faculty of Science	Chairman, Faculty of Science (Academic control on Science Faculty)	4/10/2016	3/10/2019	3 years	
7	Mohanlal Sukhadia University, Udaipur	Professor Incharge, Planning Section, MLSU	Professor Incharge (To look after execution of research projects)	23/3/2017	31/7/2021		
8	Department of Physics, MLSU, Udaipur	Coordinator, UGC DSA-II Program	To coordinate research work in Deptt. of Physics	April, 2015	March, 2020	For 5 years	
9	University Computer Centre, MLSU, Udaipur	Director	To control computer facilities in Univ. and cater need of user Departments	29/10/2014	10/11/2016	2 years	
10	University College of Science, MLSU, Udaipur	Associate Dean	Associate Dean (Administrative control of Science College)	27/6/2014	31/12/2016	2 years 6 months	
11	Mohanlal Sukhadia University, Udaipur	Additional Chief Election Officer	To conduct Student Union Election in College/University	28/8/2017, 2018, 2019			
12	Mohanlal Sukhadia University, Udaipur	Head of Department of Physics	Head of Department (Administrative and academic control of Physics Department)	1/9/2010	1/9/2013	3 years	
13	Mohanlal Sukhadia University, Udaipur	Member, Council of Dean	To take policy decisions on various issues of University	1/1/2017	13/12/2017		
14	Mohanlal Sukhadia University, Udaipur	Member, Unfairmenas/ Grievance Committee	To handle exams related complaints in University	2017, 2018, 2019			Part of duties of Chairman, Faculty of Science
15	Mohanlal Sukhadia University, Udaipur	Advisor, International Students	Advisor to International students in MLSU	28/2/2013	14/7/2015	2 years 5 months	

16	Department of Physics, MLSU, Udaipur	Radiological Safety Officer	To deal with radiation related issues	12/3/2013		6 months	
17	Mohanlal Sukhadia University, Udaipur	Member, Research Committee, Faculty of Science, MLSU, Udaipur	To evaluate and recommend submission of Research Projects	2013	31/7/2021		
18	Mohanlal Sukhadia University, Udaipur	Member, Standing Committee for SC/ST Cell	To work for benefit of SC/ST students	2012		One year	
19	Department of Physics, MLSU, Udaipur	Coordinator, DST-FIST (level-2)	To coordinate the research in Deptt. of Physics	20/12/2011	1/9/2013	1 year 8 months	
20	Mohanlal Sukhadia University, Udaipur	Chairman, House Allotment Committee	To allot the houses to University staff	2011	2012	1 year	
21	Mohanlal Sukhadia University, Udaipur	Member, Staff Council of MLSU, Udaipur	To take policy decision on academic work	2010	31/7/2021		
22	Indian Society for Radiation Physics	Vice-President	To work for benefits of radiation workers	2009	2016		
23	Mohanlal Sukhadia University, Udaipur	Assistant Dean Students Welfare and Proctor.	To look after welfare of students and control them	July, 2004	Nov. 2007	3 years 4 months	
24	University College of Science, MLSU, Udaipur	Program Officer, NSS	To conduct the NSS program and organize NSS camps	1/7/2001	30/6/2002	1 year	
25	Mohanlal Sukhadia University, Udaipur	Officer Incharge, USIC	To look after work of USIC of MLSU	17/9/1998	2000 or so.	About 2 years	
26	and so on						

14. (b) Contribution in corporate life of University, Community engagement, Experience of Pedagogy, Curriculum framing and Conduct of Examination (University/State/National Level), Served in statutory bodies, University recruitment process, etc.:

S. No.	Name of Institute	Position held	Task/responsibilities assigned	Duration		Remarks if any
				From	To	
1	Mohanlal Sukhadia University, Udaipur	Acting Vice-Chancellor	To look after routine work of University	21/8/2019 24/8/2019 27/9/2019	22/8/2019 29/8/2019 28/9/2019	Beside regular duties, conducted Student elections

						also
2	Mohanlal Sukhadia University, Udaipur	Director, Research	To promote research work in University	26/7/2018	31/7/2021	For 3 years
3	Mohanlal Sukhadia University, Udaipur	Dean	Dean of University College of Science (Academic and administrative work to run the Science Faculty)	1/1/2017	31/12/2019	3 years
4	Mohanlal Sukhadia University, Udaipur	Chairman, Faculty of Science	Chairman, Faculty of Science (Academic control on Science Faculty)	4/10/2016	3/10/2019	3 years
5	Mohanlal Sukhadia University, Udaipur	Professor Incharge, Planning Section, MLSU	Professor Incharge (To look after execution of research projects)	23/3/2017	31/7/2021	
6	Mohanlal Sukhadia University, Udaipur	Additional Chief Election Officer	To conduct Student Union Election in College/University	28/8/2017, 2018, 2019		
7	Mohanlal Sukhadia University, Udaipur	Member, Council of Dean	To take policy decisions on various issues of University	1/1/2017	13/12/2017	
8	Mohanlal Sukhadia University, Udaipur	Member, Unfairmenas/ Grievance Committee	To handle exams related complaints in University	2017, 2018, 2019	Part of duties of Chairman, Faculty of Science	
9	Mohanlal Sukhadia University, Udaipur	Advisor, International Students	Advisor to International students in MLSU	28/2/2013	14/7/2015	2 years 5 months
10	Department of Physics, MLSU, Udaipur	Radiological Safety Officer	To deal with radiation related issues	12/3/2013		6 months
11	Mohanlal Sukhadia University, Udaipur	Member, Research Committee, Faculty of Science, MLSU, Udaipur	To evaluate and recommend submission of Research Projects	2013	31/7/2021	
12	Mohanlal Sukhadia University, Udaipur	Member, Standing Committee for SC/ST Cell	To work for benefit of SC/ST students	2012		One year
13	Mohanlal Sukhadia University, Udaipur	Chairman, House Allotment Committee	To allot the houses to University staff	2011	2012	1 year
14	Indian Society for Radiation Physics	Vice-President	To work for benefits of radiation workers	2009	2016	
15	Mohanlal	Assistant	To look after welfare of	July, 2004	Nov. 2007	3 years 4

	Sukhadia University, Udaipur	Dean Students Welfare and Proctor.	students and control them			months
16	University College of Science, MLSU, Udaipur	Program Officer, NSS	To conduct the NSS program and organize NSS camps	1/7/2001	30/6/2002	1 year
17	Mohanlal Sukhadia University, Udaipur	Officer Incharge, USIC	To look after work of USIC of MLSU	17/9/1998	2000 or so.	About 2 years
As Dean, UCoS, besides usual UG and PG exam, conducted competitive exam at the centre University College of Science.						

15. (a) Research experience: **35 years**

*Prof. B.L. Ahuja has been very well recognized international scientist in the field of condensed matter physics majorly Compton scattering, X-ray fluorescence, magnetism, engineering of materials for an array of applications (like solar cells, computer hard ware, spintronics materials, etc.), imaging techniques and band structure calculations. He was awarded the prestigious BOYSCAST fellowship (1992-93) by DST, New Delhi to work at University of Warwick, U.K. for development of instrumentation for synchrotron radiations, etc. Prof. Ahuja was the only Indian Scientist who had designed, fabricated and commissioned the first Indian 20 Ci ¹³⁷Cs Compton spectrometer and the first-ever lowest intensity 100 mCi ²⁴¹Am Compton spectrometer in M.L. Sukhadia University, Udaipur, Rajasthan. For the measurement of high resolution and magnetic Compton profiles, he had worked at Universite de Paris-sud (LURE), France; Daresbury Synchrotron Source, U.K.; KEK, Japan; European Synchrotron Radiation Facility (ESRF), Grenoble, France and Super Photon Ring 8 GeV (SPring-8), Japan. Prof. Ahuja has supervised 32 (29 Physics + 2 Computer Science + 1 **Electrical Engineering in MNIT, Jaipur**) students for their Ph.D. degree and presently 7 students are working with him for the same. Prof. Ahuja has executed several R&D projects funded by DST, CSIR, UGC, AICTE, UGC-DAE-CSR, BRNS and DRDO, RUSA 2.0, etc. Prof. Ahuja had contrived working collaborations with 34 renowned institutes within India and abroad. He has published about 178 peer reviewed research papers in very reputed international journals (highest impact factor up to **24.31** and average impact factor about 3) and about 203 publications in conference proceedings, etc. In addition, Prof. Ahuja is also a reviewer of several topmost international journals (like Nature, Wiley Journals, PRB, PRL, APL, Elsevier journals) and is associated with many scientific societies in different capacities. **Scopus Citations 1925 and h-index 22.***

Post-Doctoral/Training Experience including academic visits abroad

S. No.	Duration		Institution	Designation	Nature of Work	Remarks if any
1	5/11/1992	3/11/1993 (on leave from MREC)	Worked at Univ. of Warwick, Coventry, U.K.	Post-Doctoral (Visiting Fellow) BOYSCAST Scheme of DST, New Delhi	Synchrotron radiations and instruments developments	First such fellowship in Rajasthan state

2	Jan. 18, 2012	Jan. 25, 2012	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Observation of temperature dependent orbital degree of freedom of a transition metal (T) doped $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-x}\text{T}_x\text{O}_3$ manganites by magnetic Compton Scattering. (Experimental work)	
3	July 18, 2010	July 23, 2010	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	A study of gigantic change in magnetic transitions in bulk and thin films of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ manganite by magnetic Compton scattering (Experimental work)	
4	Feb. 17, 2010	Feb. 23, 2010	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Study of metal-insulator transition in Ni doped perovskites LaFeO_3 and PrFeO_3 using magnetic Compton scattering (Experimental work)	
5	Feb. 12, 2009	Feb. 17, 2009	SPring-8, Hyogo, Japan	Visiting Scientist/Group Leader	Origin of magnetism in multiferroic materials using Compton scattering. (Experimental work)	
6	Feb. 2, 2008	Feb. 7, 2008	SPring-8, Hyogo, Japan	Visiting Scientist	Origin of martensitic transition and ferromagnetism in shape memory alloy Mn_2NiGa using	

					magnetic Compton scattering (Experimental work)	
7	July 6, 2006	July 9, 2006	Institute of High Performance Computing, Singapore	Visiting Scientist	FP-LAPW code for band structure calculations (Theoretical work)	
8	Nov. 26, 2005	Nov. 28, 2005	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic moments in Ni ₂ MnGa: A magnetic Compton study (Experimental work)	
9	May 26, 2003	May30, 2003	SPring-8, Hyogo, Japan	Visiting Scientist	Study of magnetic instability in CeF ₂ on substitution of Ir/Ru magnetic Compton scattering (Experimental work)	
10	April 3, 2002	April 10, 2002	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic Compton profiles of fcc Co in high temperature phase and fcc Fe ₅₀ Ni ₅₀ (Experimental work)	
11	June 4, 1999	June 14, 1999	SPring-8, Hyogo, Japan	Visiting Scientist	Magnetic Compton profiles of CeF ₂ and CeRu ₂ based compounds: phase I (Experimental work)	
12	Dec. 9, 1997	Dec. 18, 1997	European Synchrotron Radiation Facility (ESRF), Grenoble, France	Visiting Scientist	High resolution Compton scattering study of Nb _{0.50} Mo _{0.50} (Experimental work)	

13	May, 1997	Nov. 1997	European Synchrotron Radiation Facility (ESRF), Grenoble, France	Visiting Scientist	To measure magnetic Compton profiles (Pd-Co system) and high resolution Compton profiles (Nb and Nb-Mo) (Experimental work)	
14	March, 1996	April 1996	KEK, Japan	Visiting Scientist	Low angle x-ray scattering (Experimental work)	
15	1993		Daresbury (Synchrotron)	Visiting Scientist	Storage Ring and magnetic Compton scattering (Experimental work)	
16	May, 1993	June, 1993	Universite de Paris-sud (LURE), France	Visiting Scientist	Synchrotron radiation based Compton scattering experiments (Experimental work)	
17	March, 1993	April 1993	Universite de Paris-sud (LURE), France	Visiting Scientist	Synchrotron radiation based Compton scattering experiments (Experimental work)	

Reviewer of Journals:

As reviewer of high impact factor International Journals	Worked as a Reviewer/Referee of several International Peer Reviewed Scientific Journals like Nature, Applied Physics Letters (USA), Physica Status Solidi (b) (Germany), Physical Review Letters (USA), Phys. Rev. B. (USA), Advanced Materials Research (Switzerland), Pramana-J. Phys. (India), Applied Radiation and Isotopes (Elsevier), Solid State Communication (Elsevier), Materials Letters (Elsevier), Material Science and Engineering B (Elsevier), Materials Chemistry and Physics (Elsevier), J. of Physics and Chemistry of Solids (Elsevier), Annals of Nuclear Energy (Elsevier), Vacuum (Elsevier), Physica B (Elsevier), J. Alloys and Compounds (Elsevier), Vacuum and so on.....
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15. (b) Sponsored Research Projects:

S. No.	Title of Project	Funding agency and support received	Value	Duration		Status	Remarks if any
				From	To		
1	Measurement of magnetic Compton profiles of spintronics and magnetocaloric materials	RUSA, MHRD	1.15 crore	April, 2020	Contd.	On going	
2	Compton spectroscopy and electronic properties of some technologically important materials	SERB, New Delhi	21.22 Lac	April, 2017	November, 2020	Completed	
3	Support under UGC-SAP (DSA-II phase)	University Grant Commission, New Delhi	Rs. 2 Crore	April, 2015	March, 2020	Completed	
4	Electrical and magnetic properties of spinel oxides: Utilization of Indus synchrotron beamlines	UGC-DAE Consortium for Scientific Research, Indore	Rs. 12.19 lac	April, 2015	March, 2020	Completed	
5	Compton profile study of some technologically important materials (Phase II)	Science and Engineering Research Board (SERB), New Delhi	Rs. 33.44 lac	May, 2013	December, 2016	Completed	
6	Electronic and magnetic properties of functional materials using Compton scattering	Department of Atomic Energy-Board of Research on Nuclear Sciences (DAE-BRNS), Mumbai	Rs. 24.73 lac	April 2013	March 2016	Completed	
7	Study of electronic structure of spinel ferrites by resonant photoemission and Compton spectroscopies	UGC-DAE Consortium for Scientific Research, Indore	Rs. 2.8 lac	January, 2012	March, 2014	Completed	
8	Electronic structure of some technologically important materials	Council of Scientific and Industrial Research (CSIR), Extramural Research	Rs. 14 lac	June 2010	June 2013	Completed	

		Project, New Delhi.					
9	Compton spectroscopy and electronic structure of ceramics	University Grants Commission (UGC), New Delhi	Rs. 6 lac	May 2009	Oct. 2012	Completed	
10	Charge and magnetic Compton profiles of some alloys and compounds	Defence Research & Dev. Organization (DRDO), New Delhi	Rs. 29.24 lac	May 2009	May 2012	Completed	
11	Support under UGC-SAP (DSA-I phase)	University Grant Commission, New Delhi	Rs. 1 Crore	April 2008	March 2013)	Completed	
12	Compton profile study of some technologically important materials (Phase-I)	Department of Science & Technology (DST), New Delhi	Rs. 35 lac	October 2008	October 2012	Completed	
13	Energy dispersive experiments using gamma-rays: Phase II	Department of Science & Technology (DST), New Delhi	Rs. 21.44 lac	September 2005	August 2008	Completed	
14	Band structure calculations for some technologically important metals and semiconductors	Defence Research & Development Organisation (DRDO), New Delhi	Rs. 10.20 lac	October 2004	October 2007	Completed	
15	Characterisation of some technological important semiconductors using Compton scattering technique	Defence Research & Development Organisation (DRDO), New Delhi	Rs. 27.44 lac	Aug. 2003	Feb. 2007	Completed	
16	Energy dispersive experiments using gamma-rays: Phase I	Department of Science & Technology (DST), New Delhi	Rs. 17.90 lac	Sep. 2001	Aug. 2005	Completed	
17	Multiple scattering in the treatment of cancer using gamma-rays: A Monte Carlo simulation	Mohanlal Sukhadia University, Udaipur (Minor project)		1998	2000	Completed	
18	Measurement of high resolution and magnetic Compton profiles and fabrication of a high resolution	Department of Science & Technology (DST), New Delhi		Jan. 1996	July 1999	Completed	

	Compton spectrometer for INDUS –2 (phase-I)						
19	Quantitative determination of radionuclides in food and environment in different parts of India	AICTE (MHRD), New Delhi		April 1994	March 1997	Completed	
20	Investigation of electronic structure of some transition metals and alloys by Compton scattering technique	BRNS (DAE), Mumbai		May 1994	May 1997	Completed	
21	Compton profiles of some polycrystalline transition metals, alloys, compounds and metallic single crystals	Department of Science & Technology (DST), New Delhi (Young Scientists Scheme)		July 1990	Oct. 1994	Completed	

16. Special achievements in ML Sukhadia University, Udaipur:

S. No.	Prof. B.L. Ahuja is:
1	First Indian Scientist to develop 20 Ci ^{137}Cs Compton spectrometer
2	First-ever Scientist to develop first-ever 100 mCi ^{241}Am Compton spectrometer
3	First Indian Scientist to work on high resolution Compton spectrometer
4	First Indian Scientist to undertake magnetic Compton profile measurements.
5	Developed γ-ray environmental set-up
6	Developed band structure laboratory in University
7	As an Administrator, worked as Director , Institute of Engineering and Technology; Chairman, Faculty of Engineering; Dean and Associate Dean, University College of Science; Chairman, Faculty of Science; Head, Department of Physics; Director, University Computer Centre; Dean, PG Studies; Director, Research and Acting Vice-Chancellor of MLSU, Udaipur as mentioned earlier.

17. Publications output:

(a) No. of research papers published in very reputed peer reviewed SCI international journals: **178 (list enclosed), Citations: 1925, h-index: 22, highest impact factor 24.31**

(b) No. of research paper published in national journals: **5**

- (c) Papers presented in international/national conference /seminars /workshops: **203**
- (d) Books authored: **3**
- (e) Books edited/chapter: **1**
- (f) Popular articles: **7**
- (g) Monograph:
- (h) Training modules: M.Sc. experiments developed
- (i) Patents, if any: Not applied.....
- (j) Any other publications:

Note: List of publications as above should invariably enclosed with C.V. in chronological order.

18. (a) Awards/Honors/Merit Certificates/Applications, etc.:

S. No.	Name of Award	Year	Details of awards/	Contribution for which award/given
1	International Scientist	13 April, 2017	Honored as International Scientist by Late Sundar Singh Bhandari Trust, Udaipur	As mentioned in citation (enclosed)
2	BOYSCAST Fellowship	1992-93	BOYSCAST fellowship, 1992-93 by Government of India (first such fellowship in Rajasthan state)	To work in U.K. for one year on instrumentation development for synchrotron radiations
3	Chartered Physicist	1994	Honour of "Chartered Physicist" from Institute of Physics, London	Research work
4	Best Citizen of India	2006	Best Citizen of India by Best Citizen Publishing House, New Delhi	Research work
5	Emeritus Scientist	2022-2025+Two years more if required	Emeritus Scientist Fellowship by CSIR, New Delhi	Research Work

18. (b) Fellow of Academy/ Professional Societies, etc.:

S. No.	Membership of scientific societies
1	Institute of Physics, London (<i>Honour of "Chartered Physicist" awarded</i>)
2	Indian Society of Radiation Physics (<i>Vice President for four years</i>)
3	Indian Association of Physics Teachers
4	Indian Association of Crystal Growth
5	Indian Soc. for Technical Education
6	Indian Soc. for Technical Education
7	Rajasthan Science Congress Association
8	Indian Association of Nuclear Chemist and Allied Sciences
9	Materials Research Society of India

19. Association with international institutions/agencies:

Dr. B.L. Ahuja had working collaboration with the following international institutes/agencies (problem and publication based)

S. No.	Name of Institution	Nature of association
1	University of Warwick, UK	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
2	University of Bristol, UK	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
3	Universite Paris-sud, France	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
4	University of Warsaw (Bialystok), Poland	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
5	University of Helsinki, Finland	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
6	North eastern University, USA	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
7	European Synchrotron Radiation Facility, France	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
8	Academy of Mining and Metallurgy, Poland	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
9	University of Portsmouth, UK	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
10	Gunma University, Japan	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
11	Himeji Institute of Technology, Japan	Collaborative research work and joint publications (as evident from publications in highly reputed journals)

		journals)
12	Japan Synchrotron Radiation Research Institute, Japan	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
13	University of Uppsala, Sweden	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
14	Michigan Technological University, USA	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
15	University of Tikrit, Iraq	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
16	Universite' de Pau et des Pays de l'Adour, France	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
17	Dipartimento di Fisica, Universita degli Studi di Trento, Trento, Italy	Collaborative research work and joint publications (as evident from publications in highly reputed journals)

20. Association with national level institutions/agencies:

Dr. B.L. Ahuja had working collaboration with the following national institutes/agencies (problem and publication based)

S. No.	Name of Institution	Nature of association
1	University of Rajasthan, Jaipur	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
2	Centre for Advance Technology, Indore	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
3	Sardar Patel University, Vallabh-Vidyanagar	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
4	UGC-DAE-CSR, Indore	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
5	Feroze Gandhi College, Rae Bareli, U.P.	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
6	Malviya National Institute of Technology, Jaipur	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
7	IIT, Kharagpur	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
8	University of Kota, Kota	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
9	University of Goa, Goa	Collaborative research work and joint publications (as evident from publications in highly reputed

		journals)
10	IIT, Guwahati	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
11	National Institute of Technology, Hamirpur	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
12	Govt. Women Engg. College, Ajmer	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
13	University of Calicut, Kerala	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
14	Bhabha Atomic Research Centre, Mumbai	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
15	Manipal University, Jaipur	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
16	UM-DAE Centre for Excellence in Basic Sciences, Vidyanagari, Santacruz (E), Mumbai, India	Collaborative research work and joint publications (as evident from publications in highly reputed journals)
17	NIT, Uttarakhand	Collaborative research work and joint publications (as evident from publications in highly reputed journals)

21. Consulting experience (List key consulting assignments undertaken):

S. No.	Client/ Organization's name	Nature of assignment	Duration of assignment
1	Guiding the needy people/Scientist/Official Staff as required (day-to-day basis)	Academic guidance (Honorary) for development of academic/Research in University	Since last many years

22. Supervisor/Guide assignments:

S. No.	Level	No. of students guided
1.	P.G. (M.Sc. students) Teaching	Several hundred, Project: 20
2.	M. Phil	Not applicable
3.	Ph.D.	32 (Awarded)
4.	Post Doctorate (under Research Projects, DS Kothari Post-doc, INSPIRE Faculty,	7

	WOS-A, RUSA 2.0, etc.)	
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Ph.D. students supervised: (32 awarded)

Sr. No.	Name of scholar	Title of thesis	Place of work	Year
1	Ms. Seema Kumari Meena	Compton spectroscopy and ab-initio calculations of some functional compounds	Mohan Lal Sukhadia University, Udaipur	2021 (Awarded)
2	Mr. Arun Vaishnav (Computer Science)	An integrated visualization and simulation technique for imaging	Mohan Lal Sukhadia University, Udaipur	2020 (Awarded)
3	Mr. Arvind Sharma	Electronic structure of spinel ferrites using Compton scattering	Mohan Lal Sukhadia University, Udaipur	2018 (Awarded)
4	Dr. Samir Bhatt	Electron momentum density and band structure calculation of functional materials	Mohan Lal Sukhadia University, Udaipur	2018 (Awarded)
5	Dr. Khushboo Sharma	Compton spectroscopy and <i>ab-initio</i> electronic structure of some compounds and alloys	Mohan Lal Sukhadia University, Udaipur	2017 (Awarded)
6	Dr. Kishor Kumar	Electronic structure and Compton spectroscopy of some magnetic and solar cell compounds	Mohan Lal Sukhadia University, Udaipur	2017 (Awarded)
7	Dr. Bhoor Singh Meena	Study of electronic properties and momentum densities of some compounds	Mohan Lal Sukhadia University, Udaipur	2017 (Awarded)
8	Dr. Sonal Talreja (Computer Science)	Electronic properties of some materials for non-volatile memory and optoelectronic devices	Mohan Lal Sukhadia University, Udaipur	2017 (Awarded)
9	Dr. Sonu Sharma	Compton spectroscopy and electronic properties of some rare earth compounds	Mohan Lal Sukhadia University, Udaipur	2016 (Awarded)
10	Dr. Pradeep Jain	Electronic properties of some energetic material	Mohan Lal Sukhadia University, Udaipur	2014 (Awarded)
11	Dr. V. Raykar	Compton profile study and band structure calculations of some compounds	Mohan Lal Sukhadia University, Udaipur	2013 (Awarded)
12	Dr. K. C. Bhamu	Study of electronic properties and Compton profiles of some ceramic materials	Mohan Lal Sukhadia University, Udaipur	2012 (Awarded)

13	Dr Ritu Joshi	Compton spectroscopy and electronic properties of some refractory materials	Mohan Lal Sukhadia University, Udaipur	2012 (Awarded)
14	Dr. Hosiyar Singh Mund	Compton scattering and electronic structure study of some magnetic materials	Mohan Lal Sukhadia University, Udaipur	2012 (Awarded)
15	Dr. Jagrati Sahariya	Compton spectroscopy and band structure of some functional materials	Mohan Lal Sukhadia University, Udaipur	2012 (Awarded)
16	Dr. Amit Soni (Electrical Engineering, MNIT, Jaipur)	Investigation of Properties of Materials Used for Solar Photovoltaic Cells and Applications of the Solar Cells	Malaviya National Institute of Technology, Jaipur (joint supervision with Prof. C. M. Arora and Dr. V. Gupta of Elec. Engg.)	2012 (Awarded)
17	Dr. Gopal Choudhary	A Compton profile study of electronic structure of some materials	Mohan Lal Sukhadia University, Udaipur	2011 (Awarded)
18	Dr. Laxman Vadkhiya	Electronic structure of some thermoelectric materials and semiconductors using Compton spectroscopy	Mohan Lal Sukhadia University, Udaipur	2011 (Awarded)
19	Dr. Alpa Dashora	Electronic structure and Compton profiles of some compounds.	Mohan Lal Sukhadia University, Udaipur	2011 (Awarded)
20	Dr. Vinit Sharma	Measurements of Compton profiles and band structure calculations of some compounds and transition metals	Mohan Lal Sukhadia University, Udaipur	2010 (Awarded)
21	Dr. A. Rathor	Compton profile study of some heavy metals and compounds	Mohan Lal Sukhadia University, Udaipur	2010 (Awarded)
22	Dr. G. Ahmed	Electronic structure of some transition metal halides and alloys using Compton scattering technique	Mohan Lal Sukhadia University, Udaipur	2009 (Awarded)
23	Dr. G. Arora	Compton spectroscopy of some binary alloys and compounds	Mohan Lal Sukhadia University, Udaipur	2008 (Awarded)
24	Dr. H. Malhotra	Compton scattering study of some rare earth	Mohan Lal Sukhadia University, Udaipur	2007

		elements		(Awarded)
25	Dr. N. L. Heda	Electronic structure of some semi-conductors using Compton scattering technique	Mohan Lal Sukhadia University, Udaipur	2007 (Awarded)
26	Dr. S. Khera	Electronic structure of some heavy metals using Compton scattering technique	Mohan Lal Sukhadia University, Udaipur	2007 (Awarded)
27	Dr. V. Vyas	Compton profile study of some technological important materials	University of Rajasthan, Jaipur (joint supervision)	2007 (Awarded)
28	Dr. V. Purvia	Compton scattering study of technological important compounds	University of Rajasthan, Jaipur (joint supervision)	2007 (Awarded)
29	Dr. M. Sharma	Compton profile study of some heavy materials	Mohan Lal Sukhadia University, Udaipur	2005 (Awarded)
30	Dr. S. S. Asawat	Study of some technologically important materials by Compton scattering technique	University of Rajasthan, Jaipur (joint supervision)	2005 (Awarded)
31	Dr. T. Ramesh	Electronic structure studies of some materials by magnetic Compton scattering	University of Rajasthan, Jaipur (joint supervision)	2002 (Awarded)
32	Dr. R. Jain	Compton profile studies of some metals and binary alloys	University of Rajasthan, Jaipur (joint supervision)	2000 (Awarded)

23. Details of references, if any:

S. No.	Name of the Referee	Post Held by Referee	Email	Mobile
1	Prof. Rajeev Ahuja	Director, IIT Ropar, Punjab	rajeev.ahuja@physics.uu.se	9779789800
2	Dr. (Mrs) S. K. Mishra	Director, CSIR-Central Glass and Ceramic Research Institute (CGCRI), 196, Raja S. C. Mullick Road, Kolkata 700032. West Bengal	director@cgcri.res.in , sumank.mishra@cgcri.res.in director@cgcri.res.in	9801341664

24. Are there any criminal or civil cases pending against you in any court of law in India or abroad or have you ever been convicted by any Civil/Criminal court in India or abroad? **NO.**

25. Is/are there any Departmental enquiry(ies) and /or preliminary enquiry(ies) pending against you and/or you have been penalized resultant to any Departmental enquiry(ies). **NO.**

26. Any other information:

As a Dean, University College of Science, served as Patron/Chairman in all the National/International Conferences/Workshops/Symposiums/Schools as organized by different Departments of the Science Faculty of Mohanlal Sukhadia University, Udaipur from 1/1/2017 to 31/12/2019.

Currently working Ph.D. students

Sr. No.	Name of scholar	Title of thesis	Place of work	Year
1	Mr. Mahesh Suthar	Electronic and magnetic properties of spinel oxides using photoemission and Compton spectroscopies	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. March. 2015)
2	Mr. Pawan Kumar Jangid	Electronic response of some thermo luminescence materials using Compton spectroscopy and first principles calculations	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. May 2017)
3	Ms. Deepika Mali	Electronic structure of some magnetic and semiconductor materials using Compton spectroscopy and ab-initio calculations.	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. May 2017)
4	Ms. Pooja Kumari Joshi	Electronic response of some functional materials using Compton spectroscopy and DFT calculations	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. April 2018)
5	Ms. Yashashwini Swarnkar	Under registration	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. April 2018)

6	Mr. Lekhraj Meena	Study of electronic and magnetic properties of some functional magnetic materials and their Compton spectroscopy	Mohan Lal Sukhadia University, Udaipur	Being supervised (w.e.f. April 2019)
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Few representative academic tasks completed/on-going:

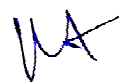
S. No.	Name of Institution	Position Held	Task/responsibilities assigned	Duration		Duration in year	Remarks if any
				From	To		
1	National Science and Technology Management Information System (NSTMIS)	Member, Programme Advisory Committee for the Plan Scheme	To help DST, New Delhi in evaluation of Research Projects and review their performance	2019 And 2022-2025 (second term)	2022	For 3 years	
2	Mohanlal Sukhadia University, Udaipur	Member of Selection Committees	To select Associate Professors and Assistant Professors in Science Faculty	May, 2018	June, 2018		
3	Mohanlal Sukhadia University, Udaipur	Coordinator, Ph.D. Course Work	To coordinate Ph.D. course related work	29/4/2017			
4	Pacific Academy of Higher Education & Research University, Udaipur	Member, Board of Studies in Physics	academic work	10/5/2017	9/5/2020	For 3 years	
5	Mohanlal Sukhadia University, Udaipur	Convener and Member of purchase Committee	Procurement of various items	Many time			
6	Mohanlal Sukhadia University, Udaipur	Member, Utilization of 2 nd Installment of RUSA grant	Establishment of Smart Class Room, Net-Working, Wi-Fi, E-Campus, Video conferencing, etc.	27/4/2017	31/7/2021		
7	Maharshi Dayanand Saraswati University, Ajmer	Member, Board of Studies in Physics	Academic work	28/3/2017			
8	Mohanlal Sukhadia University, Udaipur	Member, Committee for Vision of University	To plan vision of university	03/1/2017			
9	Mohanlal Sukhadia University, Udaipur	Member, Internal Quality Assurance Cell Committee	Quality of education related work in University	3/1/2017			

10	Jai Narain Vyas University, Jodhpur	Member, Committee of Courses and Studies in Physics	To decide various courses and syllabus of Physics subjects	19/1/2017		3 yrs	
11	Gujarat University, Navarangpura, Ahmedabad	Subject Expert (Physics)	Subject Expert in Physics	7/12/2016			
12	Mohanlal Sukhadia University, Udaipur	Member, Academic Council under Section 21(1)(c)	To take policy decision on various academic issues of University	30/11/2016		for 2 years	
13	Devi Ahilya University, Indore and Barkutlah University, Bhopal	Expert, Selection Committee Meeting	Selection for promotion of Teachers under Career Advancement Scheme	30/7/2016 & May 2019			
14	Mohanlal Sukhadia University, Udaipur	Convener	Committee for scanning of OMR and preparation of results of PG entrance test	23/7/2016			
15	Science and Engineering Research Board (SERB), New Delhi	Expert	Committee for Young Scientist in Physical and Mathematical Sciences	8/9/2015	2018		
16	Gujarat University, Navrangpura, Ahmedabad	Subject Expert (Physics)	Expert in Physics	8/5/2015			
17	The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat	Expert Member, Board of Studies in Physics & Meteorology	Subject expert to decide the courses and syllabus in Physics and Meteorology	1/9/2014	31/8/2017		
18	Women Scientist Scheme (WOS-A)	Subject Expert (Physical & Mathematical Sciences)	To evaluate and recommend the research proposals in Physics and Mathematical Sciences	12/3/2013	11/3/2016	For 3 years	
19	International Conference on "Recent Advances and Current Trends in Chemical and Biological Sciences"	Member, National Advisory Committee	Advisor to organize the Conference	2013			
20	19 th National Symposium on Radiation Physics-2012	Member, National Advisory Committee	Advisor to organize Symposium	2012			
21	Orientation Workshop on Transit of Venus-2012	Member, National Advisory Committee	Advisor to organize Workshop	2012			

22	Mohanlal Sukhadia University, Udaipur	Member, Controlling Committee for Overall Control of Student Election-2012	To conduct and control Student Union Election in University	2012			
23	Mohanlal Sukhadia University, Udaipur	Member, Committee to Review the Semester Scheme of University	To review the semester scheme of University	2012			
24	National Symposium on Advances in Materials Science and Technology-2012	Member, National Advisory Committee	Advisor to organize National Symposium	2012			
25	3 rd National Conference on Condensed Matter and Materials- March 3-5, 2012	Member, National Advisory Committee	Advisor to organize National Conference	2012			
26	Department of Science & Technology (DST), New Delhi	Expert, Regional Level Expert Committee	To review performance of INSPIRE Fellows under INPSIRE Fellowship	9/5/2012			
27	Mohanlal Sukhadia University, Udaipur	Expert, Selection Committee	Selection for the post of Professor in Physics under Career Advancement Scheme	1/5/2011			
28	Mohanlal Sukhadia University, Udaipur	Member, Statutory Selection Committee	Selection of Professors/ Associate Professors/ Assistant Professors	2011			
29	The IIS University, Jaipur	Member, Board of Studies in Physics	To decide courses in Physics	July, 2011			
30	M.L. Sukhadia University, Udaipur	Member, Screening Committee	Screening of the Application Forms for the post of Professors/ Associate Professors/ Assistant Professors in Physics, Sanskrit, Visual Arts, etc.	2011			
31	St. Paul's College of Science & Management, Abu Road	Member, Selection Committee of Principal	Selection of Principal and Teachers	2011			

		and Teachers					
32	AKC College, Chittorgarh	Member, Selection Committee of Principal and Teachers	Selection of Principal and Teachers	2011			
33	Mohanlal Sukhadia University, Udaipur	Member, Academic Council of MLSU, Udaipur	To look after academic work of University	2010	2013	3 years	
34	CTAE, MP University of Agriculture and Technology, Udaipur	Member, Committee of Courses	To decide Physics courses in MP University, Udaipur	2010	2013	3 years	
35	MNIT, Jaipur	Expert, Committee for the Discussion of Syllabus and Course Structure of UG and PG Courses	Discussion of Syllabus and Course Structure of UG and PG Courses	2008			
36	Rana Pratap Women B.Ed. College, Bhinder	Nominee of VC	Selection of Principal	2008			
37	Jai Narain Vyas University, Jodhpur	Nominee of DST, New Delhi	Selection of JRF	2005			
38	Department of Physics, MLSU, Udaipur	Dy. Coordinator, UGC DSA- SAP Program	To develop research capabilities in Department				
39	Mohanlal Sukhadia University, Udaipur	Convener and Member of different Inspection Committees	Inspection of various academic colleges affiliated with MLSU, Udaipur				
40	Mohanlal Sukhadia University, Udaipur	Convener, Committee to Decide Modalities Regarding BCA Course	To decide modalities regarding BCA Course				
41	Mohanlal Sukhadia University, Udaipur	Convener, Workshop on Public Awareness on Radiation, 2011	To organize the Workshop				
42	Mohanlal Sukhadia University, Udaipur	Convener, First International Conference on Road Safety Vision-2020	To organize the International Conference in MLSU				

43	Mohanlal Sukhadia University, Udaipur	Convener, 18 th National Symposium on Radiation Physics, 2009	To organize National Symposium in MLSU				
44	DST-Young Scientist Scheme, New Delhi	Member, Selection Committee of the Projects	To evaluate the research proposals submitted by PIs under YSS scheme				
45	and so on....						



Signature

List of publications of Prof. B.L. Ahuja

Total No. of research papers published: About 381

(a) In peer-reviewed international journals with impact factor (178):

1. Electronic and optical responses, Compton spectroscopy and manifestation of trapping centres of LiF:Mg,Ti
P.K. Jangid, Kishor Kumar, Gunjan Arora, and B.L. Ahuja
Physica B: Physics of Condensed Matter 639, 413919 (2022)
2. Validation of hybrid WC1LYP functional for ferroelectric LiNbO₃ and LiTaO₃ using Compton spectroscopy and first-principles computations.
Pooja K. Joshi, Kishor Kumar, Deepika Mali, Gunjan Arora, L. Meena, B.L. Ahuja
Materials Today Communications 31, 103288 (2022)
3. Electronic structure of tantalum dichalcogenide using Compton scattering technique and density functional theory
Deepika Mali, Kishor Kumar, Gunjan Arora, B.L. Ahuja
Rad. Phys. Chem. 182, 109379 (2021)
4. High energy γ -ray Compton spectroscopy and electronic response of rare earth sesquioxides Er₂O₃ and Yb₂O₃.
S. K. Meena, L. Meena N.L. Heda and B.L. Ahuja
Rad. Phys. Chem. 176, 108990 (2020)
5. Structural, magnetic and electronic properties of nickel ferrites: Experiment and LCAO calculations
Kalpana Panwar, Shailja Tiwari, Komal Bapna, Kishor Kumar, N.L. Heda, D.M. Phase, B.L. Ahuja
J. Alloys Comp. 831, 154835 (2020)
6. Electronic response of hydrogen storage intermetallics LaNi₅ and LaNi_{4.5}Co_{0.5}: Inelastic scattering experiments and ab-initio calculations
Gunjan Arora, L. Meena, Khushboo Sharma, Kishor Kumar, and B.L. Ahuja
Physica Scripta 95, 045813-1-045813-13 (2020)
7. Study of magnetism in Fe doped CoCr₂O₄ using magnetic Compton scattering and first-principles computations
Alpa Dashora, Mahesh Suthar, Kishor Kumar, R.J. Choudhary, D.M. Phase, H. Sakurai, N. Tsuji, Y. Sakurai, B.L. Ahuja
J. Alloys Comp. 824, 153883-1-153883-6 (2020)
8. Performance of hybrid functional in linear combination of atomic orbitals scheme in predicting electronic response in spinel ferrites ZnFe₂O₄ and CdFe₂O₄
N. L. Heda, Kalpana Panwar, Kishor Kumar, and B. L. Ahuja
J. Mater. Sci. 55, 3912–3925 (2020)
9. Magnetic properties and spin momentum densities of Ni-excess Ni-Mn-Sn Heusler alloys
A. Dashora, J. Sahariya, H.S. Mund, M.D. Mukadam, S.M. Yusuf, M. Itou, Y. Sakurai, G. Arora, and B.L. Ahuja
Journal of Magnetism and Magnetic Materials **484**, 1-7 (2019).
10. Performance of hybrid exchange-correlation potential for photocatalytic silver chromate and molybdate: LCAO theory and Compton spectroscopy

Seema Kumari Meena, N.L. Heda, Gunjan Arora, Lekhraj Meena, and B.L. Ahuja
Physica B: Condensed Matter **560**, 236-243 (2019).

11. Compton spectroscopy and electronic structure study for tetragonal barium titanate
Seema Kumari Meena, Alpa Dashora, N.L. Heda, and B.L. Ahuja
Radiation Physics and Chemistry **158**, 46-52 (2019).
12. Reply to “Comment on ‘Magnetic Compton scattering study of Laves phase ZrFe₂ and Sc doped ZrFe₂: Experiment and Green function based relativistic calculations’ by Bhatt et al.”
Samir Bhatt, H.S. Mund, Kishor Kumar, Komal Bapna, Alpa Dashora, M. Itou, Y. Sakurai, B.L. Ahuja
J. Mag. Mag. Mater. **475** 801-802 (2019).
13. Magnetic response of Nd-doped nickel ferrites using magnetic Compton scattering and XPS measurements
B. L. Ahuja, Arvind Sharma, H. S. Mund, Komal Bapna, Kishor Kumar, R. J. Choudhary, D. M. Phase, N. Tsuji and Y. Sakurai
EPL, 124 (2018) 17001
14. Electronic and optical properties of CaCl₂ using Compton scattering and density functional theory
Ashok Kumawat, Jagrati Sahariya, Kishor Kumar, B.L. Ahuja
Rad. Phys. Chem. **150** 207–211(2018)
15. Magnetic Compton scattering study of Laves phase ZrFe₂ and Sc doped ZrFe₂: Experiment and Green function based relativistic calculations
Samir Bhatt, H.S. Mund, Kishor Kumar, Komal Bapna, Alpa Dashora, M. Itou, Y. Sakurai and B.L. Ahuja
J. Mag. Mag. Mater. **454** 125-130 (2018)
16. Study of electrical and magnetic properties of RE doped layered cobaltite thin films
K. Bapna, R.J. Choudhary, D.M. Phase, R. Rawat, B.L. Ahuja
J. Mag. Mag. Mater. **453** 62-66 (2018)
17. Temperature dependent magnetic Compton profiles and first-principles strategies of quaternary half-Heusler alloy Co_{1-x}Cu_xMnSb(0≤x≤0.8)
Kishor Kumar, Alpa Dashora, N L Heda, H Sakurai, N Tsuji, M Itou, Y Sakurai and B L Ahuja
J. Phys.: Condens. Matter **29**, 425805-1-425805-8 (2017)
18. Electronic and magnetic properties of highly correlated half metallic layered Sr₂CoO₄ cobaltate using mBJ exchange potential
Komal Bapna and B. L. Ahuja
J. Supercond. Nov. Magn. **30**, 2901-2907 (2017)
19. Tungsten-doped TiO₂/reduced graphene oxide nano-composite photocatalyst for degradation of phenol: A system to reduce surface and bulk electron-hole recombination
Manisha Yadav, Asha Yadav, Rohan Fernandes, Yaksh Popat, Michele Orlandi, Alpa Dashora, D.C. Kothari, Antonio Miotello, B.L. Ahuja and Nainesh Patel,
J. Environ. Management **203**, 364-374 (2017)
20. Study of electronic structure and Compton profiles of transition metal diborides
S. Bhatt, N.L. Heda, K. Kumar and B.L. Ahuja

Physica B **518**, 13-19 (2017)

21. Electronic and optical response of Cr-doped MoSe₂ and WSe₂: Compton measurements and first-principles strategies.
Kishor Kumar, N.L. Heda, A. R. Jani and B. L. Ahuja
Journal of Physics and Chemistry of Solids **107**, 23–31 (2017)
22. Investigation of spin moment in Ga-substituted cobalt ferrite: magnetic Compton scattering and photoemission studies.
Arvind Sharma, H. S. Mund, Komal Bapna, Shailja Tiwari, M. Itou, Y. Sakurai, and B. L. Ahuja
J. Mater. Sci. **52**, 4568–4574 (2017)
23. Electron momentum distribution and electronic response of ceramic borides
N.L. Heda, B.S. Meena, H.S. Mund, Jagrati Sahariya, Kishor Kumar, B.L. Ahuja
Physica B: Physics of Condensed Matter **509**, 16-23 (2017)
24. Structural and magnetic properties of Mg doped cobalt ferrite nano particles prepared by sol-gel method
H.S. Mund and B.L. Ahuja
Materials Research Bulletin **85**, 288-233 (2017)
25. Modified Becke-Johnson potential inspired electronic and optical properties of memory storage materials PbSb₂Te₄ and SnSb₂Te₄.
S. Talreja and B.L. Ahuja
J. Mater Sci. **52**, 346-352 (2017)
26. The effect of Cr substitution on the structural, electronic and magnetic properties of pulsed laser deposited NiFe₂O₄ thin films.
K. Panwar, S. Tiwari, K. Bapna, N.L. Heda, R.J. Choudhary, D.M. Phase and B.L. Ahuja
J. Mag. Mag. Mater. **421**, 25-30 (2017)
27. Study on electron momentum density of zinc and cadmium molybdates: First principles calculations and Compton spectroscopy
K. Sharma, H.S. Mund, K. Kumar, S. Talreja and B.L. Ahuja
Physica Status Solidi B **253**, 1743-1753 (2016)
28. Feasibility of crystalline isostructural X₂Sb₂Te₅ (X=Ge, Si) phase change materials in memory storage devices: First principles calculations
S. Talreja, K. Sharma and B.L. Ahuja
Computational Materials Science **121**, 113-118 (2016).
29. High energy Compton spectroscopy and electronic structure of Laves phase ZrFe₂
S. Bhatt, K. Kumar, G. Arora, K. Bapna and B.L. Ahuja
Radiation Physics and Chemistry **125**, 109-114 (2016).
30. Electronic and optical properties of ceramic Sc₂O₃ and Y₂O₃: Compton spectroscopy and first principles calculations
B.L. Ahuja, S. Sharma, N.L. Heda, S. Tiwari, K. Kumar, B.S. Meena and S. Bhatt
Journal of Physics and Chemistry of Solids **92**, 53-63 (2016).
31. Compton profiles and Mulliken's populations of cobalt, nickel and copper tungstates: Experiment and theory.
B.S. Meena, N.L. Heda, K. Kumar, S. Bhatt, H.S. Mund and B.L. Ahuja
Physica B **484**, 1 (2016).

32. Efficient Co-B-codoped TiO₂ photocatalyst for degradation of organic water pollutant under visible light
R. Jaiswal, N. Patel, A. Dashora, R. Fernandes, M. Yadav, R. Edla, R. S. Varma, D. C. Kothari, B. L. Ahuja and A. Miotello
Applied Catalysis B: Environmental **183**, 242 (2016).
33. Electronic and optical response of zirconium sulphoselenides: Compton spectroscopy and first-principles calculations
K. Kumar, S. Bhatt, A. R. Jani and B. L. Ahuja
Physica B **478**, 138 (2015).
34. Compton profiles and electronic structure of monoclinic zinc and cadmium tungstates
B. S. Meena, N. L. Heda, H. S. Mund and B. L. Ahuja
Radiation Physics and Chemistry **117**, 93 (2015).
35. Experimental and theoretical investigations on the activity and stability of substitutional and interstitial boron in TiO₂ photocatalyst
N. Patel, A. Dashora, R. Jaiswal, R. Fernandes, M. Yadav, D.C. Kothari, B.L. Ahuja, and A. Miotello
J. of Phys. Chem. C **119**, 18581 (2015).
36. Electronic structure, optical properties and Compton profiles of RuO₂: Performance of PBEsol exchange-correlation approximation
K. Sharma, J. Sahariya and B. L. Ahuja
J. Alloys Comp. **645**, 414 (2015).
37. Ab-initio calculations for electronic structure and momentum densities of samarium sesquioxide
S. Sharma, N. L. Heda, K.K. Suthar, S. Bhatt, K. Sharma and B. L. Ahuja
Comp. Mater. Sci. **104**, 205 (2015).
38. Role of modified Becke-Johnson potential in computation of electronic and optical properties of mixed crystals CdxZn1-xSe
S. Talreja and B. L. Ahuja
Opt. Mater. **46**, 70 (2015).
39. Electronic properties and momentum densities of tin chalcogenides: Validation of PBEsol exchange-correlation potential
B. L. Ahuja, V. Raykar, R. Joshi, S. Tiwari, S. Talreja and G. Choudhary
Physica B **465**, 21 (2015).
40. Electronic structure and cohesive properties of GaN
G. Arora, H. S. Mund, V. Sharma, N. L. Heda and B. L. Ahuja
Indian J. Pure Appl. Phys. **53**, 328 (2015).
41. Temperature dependent spin and orbital magnetization in TbCo₂: Magnetic Compton scattering and first-principles investigations
B. L. Ahuja, H. S. Mund, J. Sahariya, A. Dashora, M. Halder, S. M. Yusuf, M. Itou and Y. Sakurai
J. Alloys Comp. **633**, 430 (2015).
42. Compton scattering and charge transfer in Er substituted DyAl₂
B. L. Ahuja, F. M. Mohammad, S. F. Mohammed, J. Sahariya, H. S. Mund and N. L. Heda
J. Phys. Chem. Solids **77** 50 (2015).

43. Temperature-dependent spin magnetization density in Mn-rich Ni-Mn-Sn shape memory alloy by magnetic Compton scattering
B. L. Ahuja, Alpa Dashora, H. S. Mund, K. R. Priolkar, S. M. Yusuf, M. Itou and Y. Sakurai
EPL **107** 27005 (2014).
44. Electronic structure of lanthanum sesquioxide: A Compton scattering study
Sonu Sharma, Jagrati Sahariya, Gunjan Arora and B. L. Ahuja
Physica B **450** 25 (2014).
45. Magnetic properties of NiFe_{2-x}RE_xO₄ (RE-Dy, Gd) using magnetic Compton scattering
Jagrati Sahariya, H. S. Mund, Arvind Sharma, Alpa Dashora, M. Itou, Y. Sakurai and B. L. Ahuja
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(b) In Conferences: (about 203)

1. Use of Gaussian-type orbitals in reproducing magnetic Compton profiles of Fe
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2. Magnetic Compton profile of Rare Earth Doped Nickel Ferrite using magnetic Compton scattering
Pooja K. Joshi, K. Kumar, G. Arora, A. Dashora, Y. Sakurai, H. Sakurai, N. Tsuji, N. L. Heda, L. Meena, B. L. Ahuja
Presented in 3rd National Conference on Recent Advancement in Physical Sciences (NCRAPS-2021) held from December 19-20, 2021 organized by National Institute of Technology, Uttarakhand, India.
3. Electronic properties of monoclinic phase of niobium pentoxide
Monika Rani, Gunjan Arora, Pooja K. Joshi, Deepika Mali, Kishor Kumar, Lekhraj Meena and B. L. Ahuja
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4. On the choice of exchange and correlation potentials among various hybrid and GGA potentials in deducing momentum densities of magnetocaloric La-Ni-C System
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5. First-principles investigations of electronic and magnetic properties of $\text{Fe}_{2v}1-x\text{Cr}_x\text{Si}$ Heusler alloys
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6. Influence of Te doping in titanium dichalcogenides: LCAO calculations and Compton spectroscopy.
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7. Electronic properties of vanadium pentoxide by inelastic scattering method.
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8. Electronic Structure of Ag_2MoO_4 using Compton Spectroscopy: Experiment and LCAO Calculations
Seema Kumari Meena, Lekhraj Meena, N. L. Heda, B. L. Ahuja

Presented in 64th DAE Solid State Physics Symposium organized by IIT, Jodhpur from 18-22 December, 2019

9. Compton Spectroscopy and Electronic Structure of Thermoluminescent Lithium Tetraborate
P. K. Jangid, Kishor Kumar, Gunjan Arora, B. L. Ahuja
Presented in 64th DAE Solid State Physics Symposium organized by IIT, Jodhpur from 18-22 December, 2019
10. Compton Spectroscopy to Study Electronic Response of Orthorhombic Potassium Niobate
Pooja K. Joshi, Kishor Kumar, Deepika Mali, Gunjan Arora, B. L. Ahuja
Presented in 64th DAE Solid State Physics Symposium organized by IIT, Jodhpur from 18-22 December, 2019
11. Electron momentum density and Fermi surface structures of NiSe.
Gunja Arora and B.L. Ahuja
Presented in National Conference on Recent Advancement in Physical Sciences (NCRAPS-2019) organized by National Institute of Technology, Uttarakhand from 19-20 December, 2019.
12. Electronic properties of Lithium tantalite using Compton spectroscopy.
Pooja K. Joshi, G. Arora, Deepika Mali, Pawan K. Jangid, Kishor Kumar, and B.L. Ahuja
Presented in National Conference on Recent Advancement in Physical Sciences (NCRAPS-2019) organized by National Institute of Technology, Uttarakhand from 19-20 December, 2019
13. First-principles calculations to probe electronic response of Lithium tetraborate.
Pawan K. Jangid, Gunjan Arora, Deepika Mali, Pooja K. Joshi, Kishor Kumar and B.L. Ahuja
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14. Electronic properties of SmCo₅ using first-principles calculations.
L. Meena, S.K. Meena and B.L. Ahuja
Presented in National Conference on Recent Advancement in Physical Sciences (NCRAPS-2019) organized by National Institute of Technology, Uttarakhand from 19-20 December, 2019
15. Electronic Structure Study of Vanadium Diselenide using Compton Spectroscopy
D. Mali, K. Kumar, A. R. Jani, and B. L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.
16. Compton Scattering Study of Lithium Niobate: Experimental and Theoretical Investigations
P. K. Joshi, K. Kumar, and B. L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.
17. Compton Spectroscopy of Silver Chromate and Role of HF+DFT Exchange-Correlation Potentials
Seema Kumari Meena, Lekhraj Meena and B. L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.

18. Electron Momentum Density of SmCo₅ using Compton Spectroscopy
Lekhraj Meena, Seema Kumari Meena and B. L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.
19. Electronic structure of magnetite: Ab-initio computations and electron momentum density measurements
N.L. Heda, Kalpana Panwar, and B.L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.
20. Equally normalized Compton profiles and electronic properties of A₂O₃ (A= Ga and In) using hybrid PBE0 Approximations
Hukmi Chand Suthar, Seema Kumari Meena, N.L. Heda, and B.L. Ahuja
Presented in 22nd National Symposium on Radiation Physics (NSRP-22) organized at Jawaharlal Nehru University New Delhi during the November 8-10, 2019.
21. Role of range separated hybrid density functional in predicting electronic response of LaNi_{4.5}Co_{0.5}.
G. Arora and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
22. The influence of Chromium on the structural, electronic and magnetic properties of Nickel Ferrite.
S. Tiwari, K. Panwar, K. Bapna, R.J. Choudhary, D.M. Phase and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
23. Ab-initio study of electronic properties of sulvanite compound Cu₃VS₄
G. Arora, L. Meena, R. Jain, and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
24. Ab-initio calculations for electronic structure and electron momentum density in Sm₂Co₁₇
L. Meena, S.K. Meena and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
25. Electronic properties of postassium carbonate using first-principles calculations
Y. Swarnakar, K. Kumar and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
26. Theoretical and experimental electron momentum densities of BaTiO₃
S.K. Meena, L. Meena, R. Jain and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
27. Scattering cross-section of propane and propane based tissue equivalent materials by electrons at incident energies from 20 eV to 2000 eV
P. Bhowmick and B.L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.

28. Electronic structure of thermoluminescent lithium tetraborate
Pawan Kumar Jangid, Kishor Kumar, Gunjan Arora and B. L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
29. Electronic response of semiconductor ZrSTe using momentum densities: Theory and experiment
Deepika Mali, Kishor Kumar, Gunjan Arora, A. R. Jani, and B. L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
30. Investigation of electron momentum density of potassium niobate
Pooja Kumari Joshi, Kishor Kumar and B. L. Ahuja
Presented in VII Rajasthan Science Congress-2019 organized by University College of Science, Mohanlal Sukhadia University, Udaipur from 14-16 October, 2019.
31. Effect of Mg concentration in thermoluminescence properties of LiF using first-principles calculations.
Pawan Kumar Jangid, Kishor Kumar and B.L. Ahuja
Presented in National Conference on Recent Trends in Materials Science and Nanotechnology organized by Department of Physics, IIS (deemed to be University), Jaipur from January 18-19, 2019
32. Electronic and optical response of photovoltaic semiconductor ZrS_xTe_{2-x}
Deepika Mali, Kishor Kumar and B. L. Ahuja
Presented in International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2018) Manipal University, Jaipur, Rajasthan from December 22-23, 2018.
33. Band gap engineering of AgGaS₂ for optoelectronic devices: First-principles computational technique
Maneesha Purohit, Seema Kumari Meena, Alpa Dashora and B. L. Ahuja
Presented in International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2018) Manipal University, Jaipur, Rajasthan from December 22-23, 2018.
34. Investigation of optical response of silver molybdate for photovoltaics
Seema Kumari Meena and B. L. Ahuja
Presented in International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2018) Manipal University, Jaipur, Rajasthan from December 22-23, 2018.
35. Electronic and optical response of thermoluminescence Ti and Mg doped LiF.
Pawan Kumar Jangid, Kishor Kumar and B. L. Ahuja
Presented in International Conference on Materials for Energy Application (ICME), S.S. Jain Subhodh P. G. College, Jaipur, Rajasthan from December 6-8, 2018.
36. Electronic structure and electron momentum density of TaS_{0.5}Se_{1.5}.
Deepika Mali, Kishor Kumar, A. R. Jani and B. L. Ahuja
Presented in National Research Meet on Condensed Matter Physics and Materials Science (CMPMS-18), Department of Physics, University School of Science, Gujarat University, Ahmedabad on December 8, 2018.

37. Electronic properties of LaNi_5 : Compton scattering and DFT studies
G. Arora, K. Sharma, K. K. Suthar and B. L. Ahuja
Presented in National Research Meet on Condensed Matter Physics and Materials Science (CMPMS-18), Department of Physics, University School of Science, Gujarat University, Ahmedabad on December 8, 2018.
38. Compton scattering studies and electronic properties of BaTiO_3 .
Seema Kumar Meena, Komal Bapna, N.L. Heda and B.L. Ahuja
AIP Conference Proceedings **1945** 090033 (2018)
39. Structural Study of Mg doped Cobalt Ferrite Thin Films on ITO Coated Glass Substrate
Mahesh Suthar, Komal Bapna, Kishor Kumar and B. L. Ahuja
AIP Conference Proceedings 1953, 100046 (2018)
40. Electron momentum density and Mullien's population of NiFe_2O_4 .
N.L. Heda, Kalpana Panwar, Shailja Tiwari and B.L. Ahuja B.S. Meena, Kalpana Panwar, N.L. Heda and B.L. Ahuja
Presented in 21st National Symposium on Radiation Physics (NSRP-21) held at Raja Ramanna Centre for Advanced Technology, Indore form March 5-7, 2018
41. High energy Compton spectroscopy of Er_2O_3 .
Seema Kumari Meena and B.L. Ahuja
B.S. Meena, Kalpana Panwar, N.L. Heda and B.L. Ahuja
Presented in 21st National Symposium on Radiation Physics (NSRP-21) held at Raja Ramanna Centre for Advanced Technology, Indore form March 5-7, 2018
42. Compton profile and Mulliken's population of ZnFe_2O_4 .
B.S. Meena, Kalpana Panwar, N.L. Heda and B.L. Ahuja
Presented in 21st National Symposium on Radiation Physics (NSRP-21) held at Raja Ramanna Centre for Advanced Technology, Indore form March 5-7, 2018
43. Magnetic Compton scattering study of Nd doped nickel ferrite.
Arvind Sharma, H.S. Mund, Kishor Kumar, Y. Sakurai and B.L. Ahuja
Presented in International Conference on "Nano and Functional Materials"-Interface between Science & Engineering (NFM-2017) jointly organized by Department of Chemistry, BITS Pilani Campus and Materials Research Society of India (MRSI) from 16-18 November, 2017.
44. Mulliken's populations and electron momentum densities of transition metal tungstates using LCAO scheme.
B.S. Meena, N.L. Heda and B.L. Ahuja
Presented in 2nd International Conference on Condensed Matter & Applied Physics (ICC 2017) organized by Department of Physics, Govt. Engineering College, Bikaner from November 24-25, 2017.
45. Structural study of Mg doped Cobalt Ferrite thin films on ITO coated glass substrate.
Mahesh Suthar, Komal Bapna, Kishor Kumar and B.L. Ahuja
Presented in 2nd International Conference on Condensed Matter & Applied Physics (ICC 2017) organized by Department of Physics, Govt. Engineering College, Bikaner from November 24-25, 2017.
46. Electronic structure and electron momentum densities of Ag_2CrO_4 .
Seema Kumari Meena and B.L. Ahuja

Presented in 2nd International Conference on Condensed Matter & Applied Physics (ICC 2017) organized by Department of Physics, Govt. Engineering College, Bikaner from November 24-25, 2017.
AIP Conference Proceedings **1953** 110026 (2018)

47. Modified Becke-Johnson potential inspired electronic and optical response of CdMoO₄
Khushboo Sharma, Seema Meena, and B. L. Ahuja
AIP Conference Proceedings 1832, 090006 (2017)
48. Electronic response and Fermi surface topology of strontium cobaltate
Komal Bapna and B. L. Ahuja
AIP Conference Proceedings 1832, 090012 (2017)
49. Temperature induced effects on nano-crystalline magnesium ferrite
H.S. Mund and B.L. Ahuja
Presented in 2nd International Conference on Soft Materials organized by MNIT, Jaipur on December 12-16, 2016.
50. Electronic structure of spinel ceramic oxide ZnAl₂O₄ using ab-initio calculations.
M. Suthar, K. Kumar, K. Bapna and B.L. Ahuja
Presented in National Conference and Workshop on Green Chemistry: Teaching and Technology (NCWGC-2016) organized by Department of Chemistry, Mohanlal Sukhadia University, Udaipur on 20-10-2016.
51. Electronic response of Ag₂CrO₄ using DFT calculations and Compton profile
S.K. Meena, K. Kumar, K. Bapna, K. Sharma and B.L. Ahuja
Presented in National Conference and Workshop on Green Chemistry: Teaching and Technology (NCWGC-2016) organized by Department of Chemistry, Mohanlal Sukhadia University, Udaipur on 20-10-2016.
52. Nitrogen doped TiO₂ nano-particles: Phase control by solution combustion method
K. Bapna, R.J. Choudhary, D.M. Phase, S. Shastri, R. Prasad and B.L. Ahuja
AIP Conference Proceedings **1728**, 020462 (2016).
53. Electronic properties of Laves phase ZrFe₂ using Compton spectroscopy
S. Bhatt, K. Kumar, A. Dashora and B.L. Ahuja
AIP Conference Proceedings **1728**, 020463 (2016).
54. Sensitivity of Compton scattering to electronic and magnetic properties of materials
B. L. Ahuja
Presented in 12th National Symposium on Nuclear and Radiochemistry (NUCAR-2015), organized by Bhabha Atomic Research Centre, Mumbai (February 9-13, 2015).
55. Compton scattering study of ZrS_{1.5}Se_{1.5}
K. K. Suthar, S. Bhatt, A. R. Jani and B. L. Ahuja
Presented in 12th National Symposium on Nuclear and Radiochemistry (NUCAR-2015), organized by Bhabha Atomic Research Centre, Mumbai (February 9-13, 2015).
56. Compton profiles and electronic properties of TiB₂
S. Bhatt, K. K. Suthar, S. K. Mishra and B. L. Ahuja
AIP Conference Proceedings **1665** 090012 (2015)
Presented in 59th DAE Solid State Physics Symposium (December 16-20, 2014), organized by VIT University, Vellore.

57. Electronic structure of RuO₂ using Compton scattering technique and first principles calculations
K. Sharma and B. L. Ahuja
Presented in National Conference on Materials Science (NCMS-2014), Mewar University, Chittorgarh (October 17-18, 2014).
58. Electronic structure and optical properties of phase-change materials Si₂Sb₂Te₅
S. Talreja and B. L. Ahuja
Presented in National Conference on Materials Science (NCMS-2014), Mewar University, Chittorgarh (October 17-18, 2014).
59. Electronic properties of zirconium boride using Compton scattering technique
S. Bhatt, K. K. Suthar and B. L. Ahuja
Presented in National Conference on Materials Science (NCMS-2014), Mewar University, Chittorgarh (October 17-18, 2014).
60. Compton scattering study of Gd sesquioxide
Jagrati Sahariya, A. M. Ghaleb, F. M. Mohammed and B. L. Ahuja
Presented in DAE-BRNS 5th Symposium on Nuclear Analytic Chemistry, BARC, Mumbai, page 146, Jan, 20-24, 2014.
61. Measurement of electron momentum density in Sm₂O₃ using Compton spectroscopy
Sonu Sharma, Alpa Dashora, Jagrati Sahariya and B. L. Ahuja
Presented in DAE-BRNS 5th Symposium on Nuclear Analytic Chemistry, BARC, Mumbai, page 192-193, Jan. 20-24, 2014.
62. Magnetic properties of Ga doped Cobalt Ferrite: Compton scattering study
A. Sharma, J. Sahariya, H. S. Mund, M. Itou, Y. Sakurai and B. L. Ahuja
Presented in 58th DAE-Solid state Physics symposium, Organized by Thapar University, Patiala, December 17-21, 2013.
63. Electronic structure of CdMoO₄ using Compton scattering technique
Khushboo Sharma, J. Sahariya and B. L. Ahuja
Presented in 58th DAE-Solid state Physics symposium, Organized by Thapar University, Patiala, December 17-21, 2013.
64. Compton profiles and First Principle Calculation of Ceramic Borides
B. L. Ahuja, H. S. Mund, R. Joshi and Jagrati Sahariya
Presented in International E-Workshop on Computational Condensed Matter Physics and Materials Science (IWCCMP-2013), Organized by ABV-Indian Institute of Information Technology and Management, Gwalior, November 27-29, 2013.
65. Electronic structure and momentum densities of ZnWO₄
B. S. Meena, N. L. Heda and B. L. Ahuja
Presented in International E-Workshop on Computational Condensed Matter Physics and Materials Science (IWCCMP-2013), Organized by ABV-Indian Institute of Information Technology and Management, Gwalior, November 27-29, 2013.
66. Electronic properties and Compton profiles of ZrSSe₂
K. K. Suthar, A. R. Jani, J. Sahariya and B. L. Ahuja
Presented in 3rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013), Organized by Sant Longowal Institute of Engineering and Technology, Longowal (Punjab), November 22-23, 2013.

67. Compton scattering study of ZrB_2 using high energy γ -rays
 Samir Bhatt and B. L. Ahuja
 Presented in 3rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013), Organized by Sant Longowal Institute of Engineering and Technology, Longowal (Punjab), November 22-23, 2013.
68. Electronic Structure of Explosive Materials using Compton Scattering Study
 P. Jain, J. Sahariya, H. S. Mund, M. Sharma and B. L. Ahuja
 Presented in 19th ISCB International Conference, Organized by Indian Society of Chemists and Biologists at ML Sukhadia University, March 2-5, 2013.
69. Magnetisation in 5% Ni doped $La_{0.7}Ca_{0.3}MnO_3$
 A. Sharma, H.S. Mund, J. Sahariya, A. Dashora, S. Chandra, Y. Sakurai, M. Itou and B.L. Ahuja
 Presented in 19th ISCB International Conference, Organized by Indian Society of Chemists and Biologists at ML Sukhadia University, March 2-5, 2013.
70. Electronic properties of rare earth dioxide CeO_2
 S. Sharma, J. Sahariya, A. Sharma, H.S. Mund and B.L. Ahuja
 Presented in 19th ISCB International Conference, Organized by Indian Society of Chemists and Biologists at ML Sukhadia University, March 2-5, 2013.
71. Electronic Structure Study of Nd and Gd Sesquioxides: A Compton Scattering Study
 J. Sahariya, A.M. Ghaleb, F.M. Mohammad and B. L. Ahuja
 Presented in 19th ISCB International Conference, Organized by Indian Society of Chemists and Biologists at ML Sukhadia University, March 2-5, 2013.
72. Band structure and electronic properties of transition metal chalcogenide WTe_2
 G. Arora and B. L. Ahuja
 Presented in 19th ISCB International Conference, Organized by Indian Society of Chemists and Biologists at ML Sukhadia University, March 2-5, 2013.
73. Compton profile study of rare earth oxides Nd_2O_3 and Gd_2O_3
 J. Sahariya, S. Khera, A.M. Ghaleb, F.M. Mohammad and B. L. Ahuja
 Presented in National Conference on Recent Advances in Materials and Devices, HinduCollege, Sonapat, Haryana. Feb. 27-28, 2013.
74. Magnetic Compton scattering: A reliable probe to investigate magnetic properties
 B. L. Ahuja
 AIP Conference Proceedings 1512, 26-29 (2013) ISBN 978-0-7354-1044-2
75. Spin momentum density of Nd using Compton spectroscopy
 J. Sahariya, S. Tiwari, A. Dashora, H. S. Mund, M. Itou, Y. Sakurai and B. L. Ahuja
 AIP Conference Proceedings 1512, 1194-1195 (2013) ISBN 978-0-7354-1044-2
 (Presented in 57th DAE –Solid State Physics Symposium, IIT Mumbai, Mumbai)
76. Real space analysis of Compton profile of Heusler alloy Ni_2TiAl
 J. Sahariya, H. S. Mund and B. L. Ahuja
 AIP Conference Proceedings 1447, 1307-1308 (2012) ISBN 978-0-7354-1044-2
 (Presented in 56th DAE –Solid State Physics Symposium, SRM University, Chennai)
77. Investigation of electron momentum distribution in Gd_2O_3 : A Compton scattering study
 A.M. Ghaleb, F.M. Mohammad, J. Sahariya, K. C. Bhamu and B. L. Ahuja

Presented in 3rd National Conference on Condensed Matter and Materials Physics, March 3-5, 2012, Vallabh Vidyanagar

78. Compton profiles and nature of bonding in tantalum chalcogenides
K.C. Bhamu, A. Sharma, A. R. Jani and B.L. Ahuja
Presented in National Symposium on Advances in Materials Science and Technology, Feb. 3-4, 2012, Ahmedabad.
79. Compton scattering and electronic properties of tungsten ditelluride
G. Arora and B. L. Ahuja
Presented in National Symposium on Advances in Materials Science and Technology, Feb. 3-4, 2012, Ahmedabad.
80. Role of oxygen atoms in bonding properties of semiconducting tungsten trioxide
N. L. Heda, A. Dashora and B. L. Ahuja
Presented in National Symposium on Advances in Materials Science and Technology, Feb. 3-4, 2012, Ahmedabad.
81. Energy band structure and Compton profile of niobium carbide
R. Joshi, S. Sharma and B. L. Ahuja
Presented in National Symposium on Advances in Materials Science and Technology, Feb. 3-4, 2012, Ahmedabad.
82. Compton scattering study of magnetocaloric compound GdAl₂
J. Sahariya, H. S. Mund and B. L. Ahuja
Presented in 2nd National Conference on Advanced Materials and Radiation Physics, Nov. 2011, Longowal
83. Cohesive energy of Nd using Compton scattering technique
J. Sahariya, H. S. Mund and B. L. Ahuja
Presented in 2nd National Conference on Advanced Materials and Radiation Physics, Nov. 2011, Longowal (Best poster award)
84. Compton profile and band structure of α -GeTe
G. Arora, L. Vadkhiya and B.L. Ahuja
Presented in National Conference on Functional Materials, Feb. 2011, Jodhpur
85. Reduction of area of solar photovoltaic panel by using appropriate solar cell materials
A. Soni, C.M. Arora, V. Gupta, A. Dashora and B.L. Ahuja
Presented in National Conference on Innovative Development in Next Decade: Challenges, Issues and Solutions, Feb. 2011, Jodhpur
86. Applicability of chalcopyrites CuXSe₂ (X=Al, Ga and In) in solar cells
A. Soni, A. Dashora, V. Gupta, C.M. Arora and B.L. Ahuja
Presented in International Conference on Renewable Energy 2011, Jaipur, India
87. On the possibility of solar cell applications of iron pyrite
L. Vadkhiya and B. L. Ahuja
AIP Conference Proceedings 1349, ISBN 978-0-7354-0905-7
(Presented in 55th DAE –Solid State Physics Symposium, University of Manipal, Manipal)
88. Electronic momentum densities of TiC and TiN using hybrid functional theory
R. Joshi, K.C. Bhamu, A. Dashora and B.L. Ahuja
Presented in NCRTEP-2011, VP & RTP Science College, Anand, Gujarat, India

89. Compton scattering study on the electronic properties of VC and NbC
R. Joshi, A. Dashora and B.L. Ahuja
Presented in National Symposium on Radiation Physics and Nano-Materials, (NSRPN-11), Department of Physics, Panjabi University, Patiala, India
90. Electronic structure and magnetic properties of Ni₂MnSn Heusler alloy
H.S. Mund, A. Dashora, J. Sahariya, K.C. Bhamu, K.R. Priolkar, N. Lobo, M. Itou, Y. Sakurai and B.L. Ahuja
AIP Conference Proceedings 1349, ISBN 978-0-7354-0905-7
(Presented in 55th DAE –Solid State Physics Symposium, University of Manipal, Manipal)
91. Magnetic Properties of Co₂MnO₄ using Magnetic Compton Scattering
B.L. Ahuja, A. Dashora, N.L. Heda, S. Tiwari, R. Kumar, M. Itou and Y. Sakurai
AIP Conference Proceedings 1347, ISBN 978-0-7354-0903-3
(Presented in International Conference of Magnetic Materials (ICMM-2010), SINP, Kolkata)
92. Spin Momentum Densities of Chromium Chalcogenides
L. Vadkhiya, A. Dashora and B. L. Ahuja
Presented in International Conference of Magnetic Materials (ICMM-2010), SINP, Kolkata
93. Electronic and optical properties of arsenic chalcogenides
Y. Sharma, P. Srivastava and B. L. Ahuja
Presented in 3rd International Symposium on Material Chemistry (ISMC-2010), BARC, Mumbai
94. Role of *in-house* Compton spectrometers in probing the electronic properties
N. L. Heda and B. L. Ahuja (Review article)
Recent Trends in Radiation Physics Research, 25-30 (2010). (Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009).
ISBN No. 978-81-7906-227-2
95. Electronic structure of Bi₂S₃ and Bi₂Se₃ using Compton spectroscopy
Y. Sharma, P. Srivastava, G. Ahmed, A. Dashora, L. Vadkhiya and B. L. Ahuja
Recent Trends in Radiation Physics Research, 323-324 (2010). (Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009).
ISBN No. 978-81-7906-227-2
96. Magnetic Compton scattering study of spin moment in Bi doped Co₂MnO₄
B. L. Ahuja, A. Dashora, N. L. Heda, R. Kumar, M. Itou and Y. Sakurai
Recent Trends in Radiation Physics Research, 325-326 (2010). (Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009).
[BEST PAPER AWARD] ISBN No. 978-81-7906-227-2
97. Electron momentum density in NiWO₄ using Compton scattering technique
H. Mishra, N. Yadav, A. Dashora, L. Vadkhiya and B. L. Ahuja
Recent Trends in Radiation Physics Research, 327-328 (2010). Ed. B.L. Ahuja
(Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009). ISBN No. 978-81-7906-227-2
98. Compton scattering study of HgBr₂ and HgI₂

- G. Ahmed, Y. Sharma, M. Sharma, S. Tiwari, H. S. Mund, J. Sahariya, G. Arora, R. Jain, H. Malhotra and B. L. Ahuja
Recent Trends in Radiation Physics Research, 329-330 (2010). Ed. B.L. Ahuja (Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009). ISBN No. 978-81-7906-227-2
99. Electronic properties of CdTe using Compton scattering technique
V. Raykar, G. Choudhary and B.L. Ahuja
Recent Trends in Radiation Physics Research, 335-336 (2010) Ed. B.L. Ahuja (Proceedings of 18th National Symposium on Radiation Physics, Himanshu Publications, Udaipur 2009). ISBN No. 978-81-7906-227-2
 100. Compton and photoemission spectroscopies of WO₃
S. Tiwari, A. Dashora, G. Ahmed, D. M. Phase and B. L. Ahuja
Solid State Physics 54, 715-16 (2009). (Proceedings of Solid State Physics Symposium).
 101. Electronic structure and momentum densities of tantalum nitride
A. Dashora and B. L. Ahuja
Solid State Physics 54, 713-14 (2009). (Proceedings of Solid State Physics Symposium).
 102. Compton profiles and electronic properties of ZnO and CdO
G. Choudhary, V. Raykar and B. L. Ahuja
Solid State Physics 54, 717-18 (2009). (Proceedings of Solid State Physics Symposium).
 103. Electronic structure of some transition metal halides and alloys using Compton scattering technique
G. Ahmed (Thesis presentation: supervised by Prof. B.L. Ahuja)
Solid State Physics 54, 133-34 (2009). (Proceedings of Solid State Physics Symposium).
 104. Magnetic Compton scattering study of Ni₂Mn_{1.4}Sn_{0.6}
B. L. Ahuja, N.L. Heda, Y. Sharma, A. Dashora, L. Vadkhiya, K. R. S. Priolkar, M. Itou and Y. Sakurai
Presented in Sagamore XVI (International Conference on charge, spin and momentum density) Santa Fe, New Maxico, USA (2009).
 105. Electronic properties and Compton profiles of FeS₂
Y. Sharma, N. L. Heda, M. Sharma and B. L. Ahuja
Presented in Sagamore XVI (International Conference on charge, spin and momentum density) Santa Fe, New Maxico, USA (2009).
 106. Temperature dependent spin momentum densities in Ni-Mn-In shape memory alloys
B. L. Ahuja, N.L. Heda, K. R. S. Priolkar, A. Dashora, L. Vadkhiya, M. Itou and Y. Sakurai
Presented in Sagamore XVI (International Conference on charge, spin and momentum density) Santa Fe, New Maxico, USA (2009).
 107. Electronic structure calculations and momentum densities of 2H-TaS₂
A. Dashora, A. J. Patel, A. R. Jani, N. L. Heda, L. Vadkhiya and B. L. Ahuja
Solid State Physics 53, 827-28 (2008). (Proceedings of Solid State Physics Symposium).
 108. A magnetic Compton scattering study of a ferromagnetic shape memory alloy: Mn₂NiGa
B.L. Ahuja, G. Ahmed, M. Itou, Y. Sakurai, S. Banik and S. R. Barman
Solid State Physics 53, 1093-94 (2008). (Proceedings of Solid State Physics Symposium).

109. Compton spectroscopy of some binary alloys and compounds
G. Arora (Thesis presentation: supervised by Prof. B.L. Ahuja)
Solid State Physics 53, 117-18 (2008) (Proceedings of Solid State Physics Symposium).
110. Compton scattering study of InN using ^{241}Am γ -ray source
V. Sharma and B.L. Ahuja
Presented in National Seminar on Radiation and Materials (NSRM08) at Punjabi Univ., Patiala, (2008).
111. Electronic structure of praseodymium and erbium using Compton scattering technique
S. Khera and B.L. Ahuja
Presented in National Seminar on Radiation and Materials (NSRM08) at Punjabi Univ., Patiala, (2008)
112. Compton scattering study of GeS, GeSe and GeTe
A. Rathor and B. L. Ahuja
Presented in National Seminar on Radiation and Materials (NSRM08) at Punjabi Univ., Patiala, (2008).
113. Electronic structure of AgI using Compton scattering technique
A. Marwal, K.R. Soni, A. Rathor and B.L. Ahuja
Presented in National Seminar on Radiation and Materials (NSRM08) at Punjabi Univ., Patiala, (2008).
114. Characterization of electronic properties of WSe_2 using Compton spectroscopy
G. Arora, Y. Sharma, G. Ahmed and B. L. Ahuja
Solid State Physics 52, 512-13 (2007).
(Proceedings of Solid State Physics Symposium).
115. Electronic structure of some semiconductors using Compton scattering technique
N. L. Heda and B. L. Ahuja
Solid State Physics 52, 1189-90 (2007).
(Proceedings of Solid State Physics Symposium).
116. A study of bonding in AgCl and AgBr using Compton scattering technique
A. Rathor, V. Sharma, G. Ahmed and B. L. Ahuja
Solid State Physics 52, 925-26 (2007)
(Proceedings of Solid State Physics Symposium).
117. Electronic structure of metals and alloys using Compton profiles
B. L. Ahuja
Invited talk in "Seventeenth National Symposium on Radiation Physics (NSRP-17) at Saha Institute of Nuclear Physics, Kolkata in November 2007.
118. Compton scattering study of shape memory alloys
B. L. Ahuja and V. Sharma
Invited talk in "International Conference on Ferromagnetic Shape Memory Alloys (FSMA) 2007" at S N Bose National Centre for Basic Sciences, Kolkata, India in November 2007
119. Directional Compton profile study of β -brass
V. Vyas, Y. C. Sharma, V. Sharma, A. Rathor, B. L. Ahuja and B. K. Sharma
Presented in International Conference on Condensed Matter Physics, University of Rajasthan Jaipur (2007)

120. Compton profile study of some mercury chalcogenides
G. Arora and B. L. Ahuja
Presented in International Conference on Condensed Matter Physics at University of Rajasthan in November (2007).
121. Compton profile and electronic structure calculations of rhodium
V. Sharma and B.L. Ahuja
Presented in Summer School on ab-initio Modeling in Solid State Chemistry at University of Torino, Torino, Italy in September (2007).
122. Compton profile study of As and As₂Se₃
Y. C. Sharma, V. Vyas, N. L. Heda, B. L. Ahuja and B. K. Sharma
Presented in Summer School on Ab-initio Modeling in Solid State Chemistry at University of Torino, Torino, Italy in September (2007).
123. Compton scattering: A reliable probe for verification of band structure calculations
B. L. Ahuja
Presented in 14th WIEN2K – Workshop at Institute of High Performance Computing, Singapore (2007).
124. Compton profile and electronic band structure calculation of WS₂
Y. Sharma, G. Arora, V. Sharma and B. L. Ahuja
Presented in 14th WIEN2K-Workshop at Institute of High Performance Computing, Singapore (2007).
125. Compton profiles and energy bands of lead chalcogenides
N. L. Heda and B. L. Ahuja
Presented in 6th International Conference on Inelastic X-ray Scattering 2007 at Awaji, Japan in May 2007.
126. Magnetic Compton scattering study of Ni_{2+x}Mn_{1-x}Ga ferromagnetic shape-memory alloys
B. K. Sharma, B. L. Ahuja, S. Mathur, N. L. Heda, M. Itou, A. Andrejczuk, Y. Sakurai, A. Chakrabarti, S. Banik, A. M. Awasthi and S. R. Barman
Presented in 6th International Conference on Inelastic X-ray Scattering 2007 at Awaji, Japan in May 2007.
127. Compton profile study of polycrystalline AlN and As₂Se₃
B. K. Sharma, V. Vyas, Y. C. Sharma, V. Purvia and B. L. Ahuja
Presented in 6th International Conference on Inelastic X-ray Scattering 2007 at Awaji, Japan in May 2007.
128. Role of Compton profiles in the verification of band structure calculations
B. L. Ahuja
Invited talk in symposium on “Radiation Sources, Detection and Applications (SRSDA07)” at Department of Physics, Punjabi University, Patiala in February 2007.
129. Compton profile study of HgI₂ using ¹³⁷Cs and ²⁴¹Am Compton spectrometers
G. Ahmed, M. Sharma and B. L. Ahuja
Presented in NUCAR (Nuclear and Radiochemistry) conference in Baroda in February 2007 [BEST POSTER AWARD].
130. Compton profile of InSb: Theory (LCAO) and experiment

- Y. Sharma and B. L. Ahuja
Presented in National Conference in Condensed Matter and Material Physics (CMMP) at University of Rajasthan, Jaipur, February 2007.[BEST POSTER AWARD].
131. Study of electron momentum density in lead using 661.65 keV γ -rays
M. Sharma and B. L. Ahuja
Presented in National Conference in Condensed Matter and Material Physics (CMMP) at University of Rajasthan, Jaipur, February 2007.
132. Electronic structure study of arsenic using Compton spectroscopy
Y. C. Sharma, V. Vyas, S. Mathur, B. L. Ahuja and B. K. Sharma
Presented in National Conference in Condensed Matter and Material Physics (CMMP) at University of Rajasthan, Jaipur, February 2007.
133. Electronic structure of AlN by Compton profile
V. Vyas, Y. C. Sharma, V. Purvia, G. Sharma, B. K. Sharma, N. L. Heda, B. L. Ahuja and K. B. Joshi
Presented in National Conference in Condensed Matter and Material Physics (CMMP) at University of Rajasthan, Jaipur, February 2007.
134. A study of chemical bonding in GaN and InN using electron momentum densities
V. Sharma, A. Rathor, N. L. Heda, M. Sharma and B. L. Ahuja
Solid State Physics 51, 579-80 (2006)
Proceedings of Solid State Physics Symposium).
135. Electronic states in Pr and Er using derivative of Compton profiles
S. Khera, V. Sharma, A. Rathor, N. L. Heda and B. L. Ahuja
Solid State Physics 51, 577-78 (2006)
Proceedings of Solid State Physics Symposium).
136. Compton profile of InSb: Theory (LCAO) and Experiment
Y. Sharma and B. L. Ahuja
Presented in summer school on Ab-initio Simulation of Crystalline Systems at Washington State University and Michigan Tech University Spokane, Washington U.S.A. in September (2006).
137. Electronic structure of Ta and Pb: Band structure and experimental Compton profile study
M. Sharma and B. L. Ahuja
Presented in summer school on Ab-initio Modeling in Solid State Chemistry at Deptt. of Chemistry, University of Torino, Torino, Italy in September (2006).
138. The role of Compton profiles in the verification of band structure calculations
N. L. Heda, S. Mathur and B. L. Ahuja
Presented in summer school on Ab-initio Modeling in Solid State Chemistry at Deptt. of Chemistry, University of Torino, Torino, Italy in September (2006).
139. High resolution Compton scattering study of Nb₅₀Mo₅₀
B. K. Sharma, B. L. Ahuja, A. Shukla, M. J. Cooper, Y. Tanaka, S. Kaprzyk, P. E. Mijnarends and A. Bansil
Presented in SAGAMORE XV Conference on "Electron Charge, Spin and Momentum Densities" at University of Warwick, Coventry, UK in August (2006).

140. Energy bands and Compton profiles of some cadmium chalcogenides
B. L. Ahuja, N. L. Heda and S. Mathur
Presented in SAGAMORE XV Conference on “Electron Charge, Spin and Momentum Densities” at University of Warwick, Coventry, UK in August (2006).
141. Magnetic Compton scattering study of first order magnetic transition in Ir doped CeFe_2
B. L. Ahuja, B. K. Sharma, V. Purvia, A. Koizumi, T. Nagao, A. Omura, T. Kawai and N. Sakai
Presented in SAGAMORE XV Conference on “Electron Charge, Spin and Momentum Densities” at Univ. of Warwick, Coventry, UK in August (2006).
142. A high energy Compton scattering study of gadolinium and dysprosium
S. Khera, N. L. Heda, S. Mathur and B. L. Ahuja
Presented in conference on “Laser, Smart material and Radiation Physics (LSRP06)” at Department of Physics, SLIET, Longowal (2006).
143. Electronic saranchana may Compton spectroscopy ki mahatta
B. L. Ahuja, N. L. Heda, S. khera and S. Mathur
Smarika Akhil Bhartiya Rajbhasha Takniki Sangoshthi, Solid State Physics Laboratory, New Delhi 11 (2006).
144. Compton profile analysis of CdS and CdTe
N. L. Heda, S. Mathur and B. L. Ahuja
Solid State Physics (India) 50, 543-44 (2005) (Proceedings of DAESolid State Physics Symposium).
145. Experimental verification of energy bands of tantalum
B. L. Ahuja, M. Sharma, S. Mathur and N. L. Heda
Solid State Physics (India) 50, 545-46 (2005) (Proceedings of DAE Solid State Physics Symposium).
146. Electronic structure of some semiconductors using CRYSTAL03 code
S. Mathur and B. L. Ahuja
Presented in 11th International WIEN-2K Workshop, Fukui Institute for Fundamental Chemistry, Kyoto University, Kyoto, Japan (2005).
147. Compton prakernan vidhi dwara vibhien thosavastha padhartho ki electronic saranchana ka adhayan
B. L. Ahuja, N. L. Heda, M. Sharma, S. Mathur and H. Malhotra
Smarika Akhil Bhartiya Rajbhasha Takniki Sangoshthi, Solid State Physics Lab., New Delhi, pg. 36-47 (2005).
148. Compton profile studies of samarium and terbium using ^{137}Cs Compton spectrometer
H. Malhotra, N. L. Heda, M. Sharma and B. L. Ahuja
Proceedings of Nuclear and Radiochemistry Symposium (NUCAR 2005) Eds. Chander, Acharya, Tomar and Venugopal, pg. 129-30 (2005).
149. A study of bonding in CdSe using Compton scattering technique
N. L. Heda, M. Sharma, S. Mathur and B. L. Ahuja
Solid State Physics (India) 49, 568-69 (2004)
(Proceedings of DAE Solid State Physics Symposium).
150. Temperature dependent magnetic Compton scattering study of spin moments in $\text{Ce}(\text{Fe}_{0.94}\text{Ru}_{0.06})_2$

- V. Purvia, B. L. Ahuja, B. K Sharma, M. Sharma, P. Chaddah, S. B. Roy, Y. Kakutani, A. Koizumi, T. Nagao, A. Omura, T. Kawai and N. Sakai
Solid State Physics (India) 49, 804-05 (2004)
(Proceedings of DAE Solid State Physics Symposium).
151. Compton profile study of tin
B. L. Ahuja, S. Khera, S. Mathur, N. L. Heda and T. Kobayasi
Solid State Physics (India) 49, 570-71 (2004)
(Proceedings of DAE Solid State Physics Symposium).
152. Study of magnetic Compton profiles of $\text{Ce}(\text{Fe}_{0.97}\text{Ir}_{0.03})_2$ at 70 K
B. K. Sharma, B. L. Ahuja, V. Purvia, M. Sharma, P. Chaddah, S. B. Roy, Y. Kakutani, A. Koizumi and N. Sakai
Solid State Physics (India) 46, 785-86 (2003),
(Proceedings of DAE Solid State Physics Symposium).
153. Performance of 20 Ci ^{137}Cs gamma-ray Compton spectrometer
B. L. Ahuja and M. Sharma
Solid State Physics (India) 46, 273-74 (2003)
(Proceedings of DAE Solid State Physics Symposium).
154. Role of Monte Carlo simulation in the identification of radionuclides in environmental samples
B. L. Ahuja and M. Sharma
Proceedings of XIX National Convention of Environmental Engineers, pg. 184-88 (2003).
155. Parameters for design of ^{137}Cs gamma-ray Compton spectrometer
B. L. Ahuja and M. Sharma
Proceedings Nuclear and Radiochemistry Symposium (NUCAR 2003) Eds. Tomar, Saxena, Manchanda, and Manohar, 569-70 (2003).
156. Directional Compton profiles of $\text{Nb}_{50}\text{Mo}_{50}$ alloy
K. B. Joshi, B. L. Ahuja and B. K. Sharma
Published in Disordered Materials Eds. Prakash, Goyal and Tripathi Narosa Publishing House, New Delhi 112-16 (2003)
157. Compton study of electronic states in tungsten using ^{137}Cs Compton spectrometer.
B. L. Ahuja, M. Sharma, A. Andrejczuk, E. Zukowski and B. K. Sharma,
Solid State Physics (India) 45, 377-78 (2002)
(Proceedings of DAE Solid State Physics Symposium).
158. A study of electron momentum distribution in alpha-gallium
R. Jain, S. S. Asawat, B. L. Ahuja and B. K. Sharma.
Solid State Physics (India) 44, 317-18 (2001)
(Proceedings of DAE Solid State Physics Symposium).
159. High resolution Compton profile study of $\text{Nb}_{50}\text{Mo}_{50}$
B. L. Ahuja, B. K. Sharma, Y. Sharma, A. Shukla, M. J. Cooper, S. Kaprzyk and A. Bansil.
Solid State Physics (India) 44, 309-10 (2001)
(Proceedings of DAE Solid State Physics Symposium).
160. Anisotropy in the momentum densities of niobium

R. Jain, K. B. Joshi, B. L. Ahuja and B. K. Sharma
Proc. Int. Workshop Prep. & Charact. Tech Imp. Single Crystals (NPL, New Delhi)
Editors: S. K. Gupta, S. K. Halder and G. Bhagavannarayana, pg. 377-81 (2001).

161. Development of Compton scattering technique
S. S. Asawat, Y. Sharma, R. Jain, B. L. Ahuja and B. K. Sharma
Presented in National Symp. on Current Trends in Physics, Ajmer, Feb. (2001).
162. Compton profile calculations of Ca, Sr and Ba using renormalised free atom model.
Y. C. Sharma, S. S. Asawat, B. L. Ahuja and B. K. Sharma
Presented in National Symp. on Current Trends in Physics, Ajmer, Feb. (2001).
163. A study of the electronic state of α -gallium using Compton scattering
R. Jain, S. S. Asawat, Y. Sharma, B. L. Ahuja and B. K. Sharma
Presented in National Symp. on Current Trends in Physics, Ajmer, Feb. (2001).
164. Compton scattering studies of spin moments in CeFe_2
T. Ramesh, B. L. Ahuja, B. K. Sharma, P. Chaddah, S. B. Roy, Y. Sakurai and N. Sakai
Solid State Physics (India) 43, 65-66 (2000).
(Proceedings of DAE Solid State Physics Symposium).
165. Interpretation of energy bands of molybdenum using high resolution Compton profiles.
B. L. Ahuja, R. Jain, B. K. Sharma, A. R. Jani and M. J. Cooper
Solid State Physics (India) 43, 67-68 (2000)
(Proceedings of DAE Solid State Physics Symposium).
166. Magnetic Compton scattering study of spin moments in $\text{Ce}(\text{Fe}_{0.96}\text{Ru}_{0.04})_2$
B. L. Ahuja, T. Ramesh, B. K. Sharma, P. Chaddah, S. B. Roy, Y. Kakutani,
A. Koizumi, N. Hiraoka, M. Toutani, M. Itou, Y. Sakurai and N. Sakai
Presented in SAGAMORE XIII (International Conference on Charge, Spin and
Momentum Densities, Poland) (2000).
167. High resolution Compton scattering study of molybdenum.
B. K. Sharma, B. L. Ahuja, R. Jain, A. Shukla, P. Suortti, J. Duffy and M. J. Cooper
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168. Temperature dependent magnetic Compton profiles of CeFe_2 .
T. Ramesh, B. L. Ahuja, B. K. Sharma, P. Chaddah, S. B. Roy, Y. Sakurai and N. Sakai
Presented in National Seminar on Materials Science: Trends and Future, Feb. 2000,
Sangrur (Punjab) (Proceedings published in journal).
169. Compton profile study of bonding in ZnTe .
Y. Sharma, S. S. Asawat, T. Ramesh, K. B. Joshi, R. Jain, B. L. Ahuja and B.K. Sharma
Presented in National Seminar on Materials Science: Trends and Future, Feb. 2000,
Sangrur (Punjab) (Proceedings published in journal).
170. Magnetic Compton profiles of Ru substituted CeFe_2 .
B. L. Ahuja, T. Ramesh, B. K. Sharma, P. Chaddah, Y. Kakutani, A. Koizumi, N.
Hiraoka, M. Toutani, M. Itou, Y. Sakurai and N. Sakai
Solid State Physics (India) (1999)
(Proceedings of DAE Solid State Physics Symposium).
171. Fermi-surface topology of molybdenum using high resolution Compton scattering.

- B. L. Ahuja, B. K. Sharma, Rajesh Jain, A. Shukla, P. Suortti, J. Duffy and M. J. Cooper
Solid State Physics 41, 333-34 (1998)
(Proceedings of DAE Solid State Physics Symposium).
172. Calculation of cohesive energy of some hcp metals using Compton profiles.
T. Ramesh, K. B. Joshi, B. L. Ahuja and B. K. Sharma
Presented in XII National Conference on Atomic and Molecular Physics, Udaipur (1998).
173. Compton scattering studies of electronic states in Nb-Mo alloys
R. Jain, B. L. Ahuja, Y. Sharma, K. B. Joshi and B. K. Sharma
Presented in XII National Conference on Atomic and Molecular Physics, Udaipur (1998).
174. Magnetic Compton profiles of Pd₃Co
B. L. Ahuja, J. Duffy, H. Sakurai, F. Itoh, B. K. Sharma and M. J. Cooper
Solid State Physics (India) 40C, 136 (1997)
(Proceedings of DAE Solid State Physics Symposium).
175. Directional Compton profiles of niobium
B. L. Ahuja, R. Jain, K. B. Joshi, R. K. Pandya and B. K. Sharma
SAGAMORE XII (International Conference on Charge, Spin and Momentum Densities) 90-91 (1997), Canada.
176. A study of electron momentum density distribution in molybdenum
B. K. Sharma, M. D. Sharma, B. L. Ahuja, K. B. Joshi, R. K. Pandya and R. Jain
SAGAMORE XII (International Conference on Charge, Spin and Momentum Densities) 125-26 (1997), Canada.
177. Compton profile study of beryllium oxide
K. B. Joshi, R. Jain, R. K. Pandya, B. L. Ahuja and B. K. Sharma
7th International Symposium on Radiation Physics, Jaipur, Feb. 1997
(Proceedings published in journal).
178. Anisotropy in the momentum density of Nb(50)Mo(50) alloy
B. K. Sharma, K. B. Joshi, B. L. Ahuja, R. K. Pandya and R. Jain
7th International Symposium on Radiation Physics, Jaipur, Feb. 1997
(Proceedings published in journal).
179. Compton profile of aluminium nitride
R. K. Pandya, K. B. Joshi, R. Jain, B. L. Ahuja and B. K. Sharma
Solid State Physics (India) 39C, 64 (1996).
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180. Electron momentum distribution in rhenium
D. Sharma, K. B. Joshi, B. L. Ahuja, R. K. Pandya and B. K. Sharma
Solid State Physics (India) 38C, 98 (1995)
Proceedings of DAE Solid State Physics Symposium).
181. A Compton profile study of tungsten using 662 keV gamma-rays and estimation of bremsstrahlung background
B. L. Ahuja, K. B. Joshi, S. A. Hamouda, B. K. Sharma and M. J. Cooper
Solid State Physics (India) 38C, 99 (1995)
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182. Directional Compton profiles of tantalum
B. L. Ahuja, R. K. Kothari, R. K. Pandya, B. K. Sharma and M. J. Cooper
Solid State Physics (India) 37C, 109 (1994)
(Proceedings of DAE Solid State Physics Symposium).
183. Compton profile of ruthenium
R. K. Kothari, K. B. Joshi, M. D. Sharma, B. L. Ahuja and B. K. Sharma
Solid State Physics (India) 37C, 108 (1994)
(Proceedings of DAE Solid State Physics Symposium).
184. A study of electronic state in Fe-Ni alloys
B. K. Sharma, B. L. Ahuja, M. D. Sharma, S. Hamouda and M. J. Cooper
Presented in SAGAMORE XI (International Conference on Charge, Spin and
Momentum Densities) France 127-28 (1994).
185. A study of electron momentum density distribution in Ta using Compton scattering
technique
B. L. Ahuja, B. K. Sharma, R. K. Pandya, R. K. Kothari and M. J. Cooper
SAGAMORE XI (International Conference on Charge, Spin and Momentum Densities),
France 131-32 (1994).
186. Compton profile of polycrystalline tungsten using 662 keV gamma-rays
S. Hamouda, B. L. Ahuja, E. Zukowski and M. J. Cooper
Presented in Euro conference on Dynamic Properties of Condensed Matter, Greece
(1993).
187. Electron momentum distribution study in molybdenum by Compton scattering
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