

CURRICULUM VITAE

Dr. Rajesh Punia

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EDUCATIONAL QUALIFICATIONS

Ph.D. in Physics

Topic: “Study of electronic transport properties of some modified semiconductors”
Department of Applied Physics, GJUS&T, Hisar.

M. Sc. in Physics

Department of Physics & Astrophysics,
University of Delhi, Delhi.

FELLOWSHIPS AND AWARDS

- Merit scholarship at 10th level.
- CSIR-JRF qualified (Dec. 2002 & Dec. 2003).
- GATE Qualified in 2003.
- Qualified several competitive exams like DRDO, BARC, JEST etc.
- 1st position in M Sc (Physics) entrance examination of MDU, Rohtak held in 2000.
- 2nd position in M Sc (Physics) entrance examinations of University of Delhi, Delhi held in 2001.
- 1st position in Training course on “*Radiological Safety Aspects in the Research Application of Ionising Radiation*” from May 21-29, 2012 organized by *Radiological Physics and Advisory Division, Bhabha Atomic Research Centre, Mumbai* in collaboration with *Indian Association for Radiation Protection*.

FOREIGN VISITS

- Training Course and Seminar on *Broadband Dielectric and Impedance Spectroscopy and Its Applications* (Advanced course) by *Novocontrol Technologies* under the guidance of *Prof. B. Roling and Prof. F. Kremer in Department of Chemistry, University of Marburg, Marburg, Germany* from September 25-27, 2013.
- Seminar on *Capacity Building for excellence in Higher Education in Bangkok, Thailand* from June 22-26, 2014.

ADMINISTRATIVE EXPERIENCE

- *Hostel Warden* from April 2006 to December 2006.
- Member of *Standing Purchase Committee* from Dec. 2005 to Dec. 2007.
- Member of *Library Purchase Committee* from Nov. 2006 to Nov. 2007.
- Member of *House Allotment Committee* from Sept. 2006 to Nov. 2008 and Sept. 2012 to Oct. 2013.
- *Assistant Coordinator of Technical Education Quality Improvement Programme - II* from April 2013 to April 1, 2015.
- Member of *Board of Post – graduate Studies* in Applied Physics from Dec. 2012 to Jan. 2014.
- Member of *Board of Under – graduate Studies* in Applied Physics from March 2013 to January 2014.
- Member of *Board of Studies* in Applied Physics from August 2014 to April 1, 2015.
- *Radiation Safety Officer* of *GJUS&T, Hisar* from Dec. 09, 2014 to April 1, 2015.
- *Subject expert* and member of *Selection Committee* for the post of *Lecturer in Physics* for *PG classes* and *Lecturer in Electronics* for *UG classes* in AI Jat Heroes' Memorial College, Rohtak.
- *Subject expert* and member of *Selection Committee* for the post of *Lecturer in Physics* for *UG classes* in Matu Ram Institute of Technology, Rohtak.
- *Chairperson, Department of Physics, IGU, Meerpur, Rewari from April 15, 2015 to July 15, 2015 and August 28, 2015 to March 31, 2016.*

- Member of *Central Purchase Committee* in *IGU, Meerpur, Rewari* from May 25, 2015 to till date.
- *Director Youth Welfare* of *IGU, Meerpur, Rewari* from April 8, 2015 to till date.
- *Director Sports* of *IGU, Meerpur, Rewari* from April 8, 2015 to August 31, 2015.
- *Chairperson, Department of Chemistry, IGU, Meerpur, Rewari from July 15, 2015 to March 31, 2016.*
- *Secretary to Vice-Chancellor, IGU, Meerpur, Rewari from July 31, 2015 to March 31, 2016.*
- *Deputy Director, Directorate of Distance Education, GJUS&T, Hisar* from Sept. 15, 2016 to Feb. 08, 2017.
- *Liaisoning Officer, GJUS&T, Hisar* from Feb. 08, 2017 to March 13, 2017.

RESEARCH PROJECTS

Sr. No.	Title & Type of Projects (Sponsored/Consultancy) (Major/Minor)	Carried out /On Going	Funding Agency	Period	Amount Mobilized (Rs. In lakhs)
1	Synthesis and Characterization of Bismuth based Oxide Glasses (Sponsored)	Carried out	GJUS&T, Hisar	1 year	0.40
2	Nonlinear Optical Properties of Heavy Metal Oxide Doped Glasses (Sponsored)	Carried out	GJUS&T, Hisar	1 year	1.00
3.	Rn/Th and Gamma-Radiation Levels Quantification in Four Districts of Haryana (Sirsa, Fatehabad, Hisar and Bhiwani) India	On Going	BRNS, Mumbai	3 years	35.287

RESEARCH PUBLICATIONS

(i) **International Journals**

(a) *Published: 52*

(b) *Under review: 03*

(ii) **National Journals**

(a) *Published: 01*

S.No.	Publication	Impact factor
50	Sandeep Kaushik, Rajesh Punia , Atul Tyagi, Mann P. Singh; <i>Dosimetric studies of cadmium free alloy used in compensator based intensity modulated radiotherapy. Radiation Physics and Chemistry 139 184–189 (2017). (Publisher: Elsevier).</i>	1.315
49	Anil Kumar, Rajesh Punia , Arun K. Gupta, Devendra Mohan, Kirti Kapoor; <i>Study of all-optical switching properties of zinc phthalocyanine thin film by pump-probe technique. Optics and Laser Technology 95 100–104 (2017). (Publisher: Elsevier).</i>	2.109
48	Sunil Dhankhar, R. S. Kundu, Sunita Arya, Preeti Sharma, S. Murugavel, R. Punia , and N. Kishore; <i>Zinc Chloride Modified Electronic Transport And Relaxation Studies in Barium-Tellurite Glasses. Electronic Materials Letters (Accepted March 01, 2017) (Publisher: Springer).</i>	2.057
47	Neelam Berwal, Sunil Dhankhar, Preeti Sharma, R.S. Kundu, R. Punia , N. Kishore; <i>Physical, structural and optical characterization of silicate modified bismuth-borate-tellurite glasses. Journal of Molecular Structure 1127, 636-633 (2017). (Publisher: Elsevier).</i>	1.780
46	Vanita Thakur, Anupinder Singh, R. Punia , S. Dahiya, and Lakhwant Singh; <i>Structural properties and electrical transport characteristics of modified lithium borate glass ceramics. Journal of Alloys and</i>	3.014

	Compounds 696 529-537 (2017). (Publisher: Elsevier).	
45	Sandeep Kaushik, Atul Tyagi, Lalit Kumar, Man Pal Singh, Rajender Singh Kundu, Rajesh Punia ; <i>Validation of intensity-modulated radiotherapy commissioning as per recommendations in test plans of the American Association of Physicists in Medicine task group 119 report. Radiation Protection and Environment</i> 39(3) , 138 (2016).	-
44	R. S. Kundu, Sunil Dhankhar, R. Punia , Meenakshi Dult, and N. Kishore; <i>Thermal and structural properties of zinc modified tellurite based glasses. American Institute of Physics Conf. Proc.</i> 1731 , 070039 (2016). (Publisher: American Institute of Physics).	-
43	Suman Rani, Neetu Ahlawat, R. Punia , R. S. Kundu, and N. Ahlawat; <i>Effect of microwave-assisted sintering on dielectric properties of CaCu₃Ti₄O₁₂ ceramic. American Institute of Physics Conf. Proc.</i> 1731 , 050004 (2016). (Publisher: American Institute of Physics).	-
42	Sanjay, N. Kishore, R. Kundu, S. Dahiya, I. Pal, S. Dhankhar, and R. Punia ; <i>Characterization and optical properties of Fe₂O₃-PbO-B₂O₃ glasses. American Institute of Physics Conf. Proc.</i> 1728 , 020549 (2016). (Publisher: American Institute of Physics).	-
41	Sunil Dhankhar, R. S. Kundu, R. Punia , Sunita, R. Parmar, Sanjay, and N. Kishore; <i>Structural characterization of ZnCl₂ modified tellurite based glasses. American Institute of Physics Conf. Proc.</i> 1728 , 020340 (2016). (Publisher: American Institute of Physics).	-
40	Preeti Sharma, Parveen Kumar, R. S. Kundu, N. Ahlawat, R. Punia ; <i>Enhancement in magnetic, piezoelectric and ferroelectric properties on substitution of titanium by iron in barium calcium titanate ceramics. Ceramics International</i> 42 12167–12171 (2016). (Publisher: Elsevier).	2.758

39	Kirti Nanda, R. S. Kundu, Inder Pal, R. Punia and N. Kishore; <i>Concentration dependence of intensity parameters and radiative properties of Sm³⁺ ions doped in BaO-ZnO-B₂O₃ glasses.</i> Journal of Alloys and Compounds 676 521-526 (2016). (Publisher: Elsevier).	3.014
38	Sajjan Dahiya, R. Punia , S. Murugavel, and A. S. Maan; <i>Conductivity and Modulus Formulation in Lithium Modified Bismuth Zinc Borate Glasses.</i> Solid State Sciences 55 , 98 – 105 (2016). (Publisher: Elsevier).	2.041
37	S Dhankhar, R S Kundu, M Dult, S Murugavel, R Punia, and N Kishore. <i>Electrical conductivity and modulus formulation in zinc modified bismuth boro-tellurite glasses.</i> Indian J Phys 90(9) 1033–1040 (2016). (Publisher: Springer).	1.166
36	Rajesh Parmar, J. Hooda, R. S. Kundu, R. Punia , and N. Kishore; <i>Optical characterization of Zinc Modified Bismuth Silicate Glasses.</i> International Journal of Optics Volume 2015 , Article ID 476073, 9 pages. (Publisher: Hindawi Publishing Corporation).	
35	Sunil Dhankhar, R. S. Kundu, R. Parmar, S. Murugavel, R. Punia , and N. Kishore; <i>Electronic Transport and Relaxation Studies in Bismuth modified Zinc boro-tellurite Glasses.</i> Solid State Sciences 48 , 230 – 236 (2015). (Publisher: Elsevier).	2.041
34	Vanita Thakur, Himmat Singh, Anupinder Singh, Rahul Vaish, R. Punia , Lakhwant Singh; <i>A study on the structural and photocatalytic degradation of ciprofloxacin using (70B₂O₃-29Bi₂O₃-1Dy₂O₃)-x(BaO-TiO₂) glass ceramics.</i> Journal of Non Crystalline Solids 428 , 197–203 (2015). (Publisher: Elsevier).	1.825
33	Preeti Sharma, Parveen Kumar, R. S. Kundu, J.K. Juneja, N.Ahlawat, R. Punia ; <i>Rietveld Refinement and Dielectric Properties of Substituted Barium Titanate Ceramics for Capacitor Applications.</i> Ceramics	2.758

	International 41 (10), 13425-13432 (2015). (Publisher: Elsevier).	
32	Sarita Sharma, Kirti Nanda, R. S. Kundu, R. Punia , and N. Kishore; <i>Structural properties, Conductivity, Dielectric studies and Modulus formulation of Ni modified ZnO nanoparticles. Journal of Atomic, Molecular, Condensate & Nano Physics 2(1) 15-31 (2015).</i>	-
31	V Thakur, A Singh, R Punia , M Kaur, and L Singh; <i>Effect of BaTiO₃ on the structural and optical Properties of lithium borate glasses. Ceramics International 41 (9) 10957–10965 (2015). (Publisher: Elsevier).</i>	2.758
30	Meenakshi Dult, R.S.Kundu, J. Hooda, S. Murugavel, R. Punia , and N. Kishore; <i>Temperature and Frequency Dependent Conductivity and Electric Modulus Formulation of Manganese Modified Bismuth Silicate Glasses. Journal of Non Crystalline Solids 423–424 1–8 (2015). (Publisher: Elsevier).</i>	1.825
29	Sarita Sharma, R. S. Kundu, Anupinder Singh, S. Murugavel, R. Punia , and N. Kishore; <i>Structural, Optical, Electrical and Magnetic Properties of Zn_{0.7}Mn_xNi_{0.3-x}O Nanoparticles Synthesized by Sol Gel Technique. Cogent Physics 2, 1055623 (2015). (Publisher: Taylor & Francis)</i>	-
28	Neelam Berwal, R. S. Kundu, Kirti Nanda, R. Punia , and N. Kishore; <i>Physical, Structural and Optical Characterizations of Borate Modified Bismuth-Silicate-Tellurite Glasses. Journal of Molecular Structure 1097, 37–44 (2015). (Publisher: Elsevier).</i>	1.780
27	Sajjan Dahiya, Rajesh Punia , Anupinder Singh, Anup S. Maan, and Sevi Murugavel; <i>DC Conduction and Electric Modulus formulation of Lithium-Doped Bismuth Zinc Vanadate Semiconducting Glassy System. Journal of American Ceramic Society 98 (9), 2776-2783 (2015). (Publisher: Wiley).</i>	2.610
26	Kirti Nanda, R.S. Kundu, Sarita Sharma, Devendra Mohan, R. Punia , and	2.041

	N. Kishore; Study of Vibrational Spectroscopy, <i>Linear and Non-Linear Optical Properties of Sm³⁺ ions doped BaO-ZnO-B₂O₃ Glasses</i> . <i>Solid State Sciences</i> 45 15-22 (2015). (Publisher: Elsevier).	
25	Om Prakash Gurjar, Sandeep Kaushik, Surendra Prasad Mishra, Rajesh Punia ; <i>A study on room design and radiation safety around room for Co-60 after loading HDR brachytherapy unit converted from room for Ir-192 after loading HDR brachytherapy unit</i> . <i>International Journal of Health & Allied Sciences</i> 4 (2) 83 – 88 (2015). (Publisher: JSS University, Mysore).	-
24	Sunita Rani, Devendra Mohan, Anil Kumar and Rajesh Punia ; <i>Optical second order nonlinearity in ultraviolet poled chalcogenide thin films</i> . <i>Journal of Optics</i> 44 (4), 417-422(2015). (Publisher: Springer).	-
23	Meenakshi Dult, R.S. Kundu, Neelam Berwal, R. Punia , N. Kishore; <i>Manganese Modified Structural and Optical Properties of Bismuth Silicate Glasses</i> . <i>Journal of Molecular Structure</i> 1089 32–37 (2015). (Publisher: Elsevier).	1.780
22	Kirti Nanda, Neelam Berwal, R. S. Kundu, R. Punia , and N. Kishore; <i>Effect of doping of Nd³⁺ ions in BaO-TeO₂-B₂O₃ Glasses: A Vibrational and Optical Study</i> . <i>Journal of Molecular Structure</i> 1088 147–154 (2015). (Publisher: Elsevier).	1.780
21	Sajjan Dahiya, R. Punia , S. Murugavel, and A.S. Maan; <i>Structural and other physical properties of lithium doped bismuth zinc vanadate semiconducting glassy system</i> . <i>Journal of Molecular Structure</i> 1079 189–193 (2015). (Publisher: Elsevier).	1.780
20	Lakhwant Singh, Vanita Thakur, R. Punia , R.S. Kundu, and Anupinder Singh; <i>Structural and optical properties of barium titanate modified bismuth borate glasses</i> . <i>Solid State Sciences</i> 37 64-71 (2014). (Publisher: Elsevier).	2.041

19	Meenakshi Dult, R. S. Kundu, S. Murugavel, R. Punia , and N. Kishore; <i>Conduction mechanism in bismuth silicate glasses containing titanium. Physica B</i> 452 102–107 (2014). (Publisher: Elsevier).	1.352
18	S. Dahiya, R. Punia , S. Murugavel, and A. S. Maan; <i>Temperature and frequency dependent conductivity of lithium doped bismuth zinc vanadate semiconducting glassy system. Indian Journal of Physics</i> 88(11) 1169 (2014). (Publisher: Springer).	1.166
17	Rajesh Parmar, R. S. Kundu, R. Punia , P. Aghamkar, and N. Kishore; <i>Iron modified structural and optical spectral properties of bismuth silicate glasses. Physica B</i> 450 39–44 (2014). (Publisher: Elsevier).	1.352
16	J. Hooda, R. S. Kundu, R. Punia , S. Murugavel and N. Kishore; <i>Investigation of electronic transport properties of bismuth zinc silicate glasses. International Journal of Applied Science & Technology Research Excellence</i> 4 (1) 19 (2014).	-
15	R.S. Kundu, Meenakshi Dult, R. Punia , Rajesh Parmar, N. Kishore; <i>Titanium induced structural modifications in bismuth silicate glasses. Journal of Molecular Structure</i> 1063 77-82 (2014). (Publisher: Elsevier).	1.780
14	R.S. Kundu, Sunil Dhankhar, R. Punia , Kirti Nanda, N. Kishore; <i>Bismuth modified physical, structural and optical properties of mid-IR transparent zinc boro-tellurite glasses. Journal of Alloys and Compounds</i> 587 66–73 (2014). (Publisher: Elsevier).	3.014
13	Sanjay Dahiya, R. Punia , Sanjay, R. S. Kundu, Ashwani Sharma, and N. Kishore; <i>Effect of B₂O₃ on Physical and Structural properties of 95[xB₂O₃ . (100-x)Bi₂O₃] . 5Fe₂O₃ Glass System. Journal of Scientific and Technical Research</i> 3 (1) 7-13 (2013).	-
12	R.S Kundu, Sunil Dhankar, R.Punia and N. Kishore; <i>ZnCl₂ Modified Physical and Optical Properties of Barium Tellurite Glasses.</i>	0.548

	<i>Transactions of the Indian Ceramic Society</i> 72 (3) 206-210 (2013). (Publisher: Taylor & Francis).	
11	R. Punia , R. S. Kundu, J. Hooda, Rajesh Parmar, and N. Kishore; <i>Optical properties of Bi_{0.1}Zn_{0.45}VO_{3.1} thin films using UV-VIS-NIR Spectroscopy. American Institute of Physics Conf. Proc. 1536, 539 (2013). (Publisher: American Institute of Physics).</i>	-
10	Rajesh Parmar, R. S. Kundu, R. Punia , P. Aghamkar, and N. Kishore; <i>Effect of Fe₂O₃ on the physical and structural properties of bismuth silicate Glasses. American Institute of Physics Conf. Proc. 1536, 653 (2013). (Publisher: American Institute of Physics).</i>	-
9	Kirti Nanda, R. S. Kundu, R. Punia , R. Parmar, and N. Kishore <i>Physical and structural properties of Nd³⁺ doped BaO-ZnO-B₂O₃ glasses. American Institute of Physics Conf. Proc. 1536, 659 (2013). (Publisher: American Institute of Physics).</i>	-
8	Sajjan Dahiya, A. S. Maan, R. Punia , R. S. Kundu, and S. Murugavel; <i>Physical, optical and structural properties of xNa₂O-(50-x)Bi₂O₃-10ZnO-40B₂O₃ glasses. American Institute of Physics Conf. Proc. 1512, 566 (2013). (Publisher: American Institute of Physics).</i>	-
7	Sunil Dhankhar, R. S. Kundu, Rajesh Punia , Meenakshi, and Nawal Kishore; <i>Effect of ZnO on the physical and optical properties of tellurite base Glasses. American Institute of Physics Conf. Proc. 1512, 580 (2013). (Publisher: American Institute of Physics).</i>	-
6	Rajesh Parmar, R.S. Kundu, R.Punia , N.Kishore and P. Aghamkar; <i>Fe₂O₃ Modified Physical, Structural and Optical Properties of the Bismuth Silicate Glasses. Journal of Materials 2013 650207 (2013). (Publisher: Hindawi Publishing Corporation).</i>	-
5	J.Hooda, R. Punia , R.S Kundu, Sunil Dhankar and N. Kishore; <i>Effect of addition of ZnO on structure and physical properties of bismuth silicate</i>	-

	<i>glasses. ISRN Spectroscopy</i> 2012 578405 (2012). (Publisher: Hindawi Publishing Corporation).	
4	Sajjan Dahiya, A.S Maan, R. Punia , R.S Kundu and S. Murugavel; <i>Physical, Optical and Structural Properties of $x\text{Li}_2\text{O}$- (50-x) Bi_2O_3-10ZnO-40B_2O_3 Glasses. Transactions of the Indian Ceramic Society</i> 71(4) , 225 (2012). (Publisher: Taylor & Francis).	0.548
3	R. Punia , R. S. Kundu, S. Murugavel and N. Kishore; <i>Hopping conduction in bismuth modified zinc vanadate glasses: An applicability of Mott's Model. Journal of Applied Physics</i> 112 , 113716 (2012). (Publisher: American Institute of Physics).	2.101
2	R. Punia , R. S. Kundu, Meenakshi, S. Murugavel and N. Kishore; <i>Temperature and frequency dependent conductivity of bismuth zinc vanadate semiconducting glassy system. Journal of Applied Physics</i> 112 , 083701 (2012). (Publisher: American Institute of Physics).	2.101
1	R. Punia , R. S. Kundu, S. Dhankar, J. Hooda and N. Kishore; <i>Effect of Bi_2O_3 on structural, optical and other physical properties of semiconducting zinc vanadate glasses. Journal of Applied Physics</i> 110 , 033527 (2011). (Publisher: American Institute of Physics).	2.101

(iii) Conference Proceedings : 42

(iv) Lecture / invited talks delivered: 22

(Rajesh Punia)
Rohtak