

CURRICULUM VITAE



Dr. Richa Saini
Assistant Professor-III
Department of Physics
Kanya Gurukul
Gurukul Kangri Deemed To Be University
Haridwar-249407
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Academic Qualification: M.Sc., Ph.D. (Condensed Matter Physics-Theoretical)

Area of Research: Theoretical Condensed Matter Physics(Low Dimensional System)
and Material Science (Experimental)

Designation: Assistant Professor-III, Department of Physics,Kanya Gurukul,Gurukul
Kangri Deemed to be University, Haridwar, Uttarakhand, India

Teaching / Research Experience: About 14 Years.

Date of Birth: 11 April 1977

Administrative Experience: Programme Officer in National Service Scheme(2012-2015)
Member in OBC Committee, KGC, Haridwar(2012-Continue)
Editorial Board member in Research Journal of Physical
Science
Convener of Alumni Department of Physics, KG, GK(DU)
Haridwar(2021-Continue)

Membership of Academic Bodies:

Life Member of : (i) The Indian Physical Society (LM/0937)

(ii) Indian Physics Association (GEN/LM/12744)

(iii) The Indian Physics Teachers Association (9914, L6233)

(iv) International Science Congress Association (FM-222)

(v) The Indian Science Congress Association (L17140)

(vi) The Indian Science Congress Association: Haridwar Chapter (46)

(vii) International Scientific Research Organization for Science,
Engineering and Technology (LM-1010)

Membership of : (i) Blood Donors Society, Gurukul Kangri Deemed to be University, Haridwar

Ph.D. Students Produced: 03

Ph.D. Students working at present: 02

M.Sc. Dissertations Supervised: 225

**Attended: Orientation Programme-02; Refresher Programme-02;
Short Term Programme- 13**

Paper Presented in National and International Conferences:

1. "Role of Thermal Conductivity of GaAs" National Seminar on Innovations and Applications in Engineering & Applied sciences (9-10 November, 2011), Faculty of Engineering Technology, Gurukul Kangri Vishwavidyalaya, Haridwar.
2. "Phonon Conduction in InAs Quantum Well" 4th National Conference on Nanomaterials & Nanotechnology (21-23, December, 2011), Department of Physics, University of Lucknow.
3. "Thermal Conductivity of Quantum Well" International Conference on Green Technologies for Environmental Rehabilitation (11-13 February, 2012), Faculty of Engineering Technology, Gurukul Kangri Vishwavidyalaya, Haridwar.
4. "Role of Physics in Sports" International Conference on Global Innovations, Strategies & Policies in Physical Education & Sports Sciences (24-26 February, 2012, Department of Physical Education & Sports, Gurukul Kangri Vishwavidyalaya, Haridwar.
5. "Transport Phenomena and Phonon Scattering in Semiconductor Quantum Wells" International Conference on Materials Sciences and Technology (10-14, June, 2012) Department of Physics, St. Thomas College Pala, Kottayam, Kerala.
6. "Phonon Scattering in Semiconductor Quantum Well" National Conference on Progress in Electronics & Allied Sciences (3-4 November, 2012), Faculty of Engineering Technology, Gurukul Kangri Vishwavidyalaya, Haridwar.

7. "Transport Phenomena in Semiconductor Quantum Well" 2nd International Science Congress (8-9 December, 2012), Bon Maharaj Engineering College, Vrindavan, Mathura.
8. "Scattering in Lattice Thermal Conductivity of InAs" 101st Indian Science Congress (3-7, February, 2014), University of Jammu.
9. "Role of Scattering Process in Lattice Thermal Conductivity of GaAs" National Conference on Innovations in Science and Technology for Inclusive Development (22-23 March, 2014) ISCA Haridwar Chapter & Department of Chemistry, Ch. Charan Singh University, Meerut.
10. "Many Body Problems in Quantum Well" National Symposium on Instrumentation (15-17 October, 2014) Faculty of Engineering & Technology, Gurukul Kangri Vishwavidyalaya, Haridwar & Instrument Society of India, Department of Instrumentation Indian Institute of Science, Bangalore.
11. "Lattice Thermal Conductivity at Low Temperature" National Symposium on Instrumentation (15-17 October, 2014) Faculty of Engineering & Technology, Gurukul Kangri Vishwavidyalaya, Haridwar & Instrument Society of India, Department of Instrumentation Indian Institute of Science, Bangalore.
12. "Many Body Problems in Semiconductor Quantum Wells" 102nd Indian Science Congress (3-7 January, 2015) University of Mumbai.
13. "Green's Function Theory of phonon and Electrons" National Conference on Science & Technology for Human Development (20-21 March, 2015) ISCA Haridwar Chapter & Department of Ancient Indian History, Culture & Archaeology, Gurukul Kangri Vishwavidyalaya, Haridwar.
14. "Thermal Transport in Semiconductors" National Conference on Science & Technology for Indigenous Development in India (28-30 Sep 2015) The Indian Science Congress Association: Haridwar Chapter & F.E.T., G.K.V., Haridwar.
15. "Study of Evapotranspiration" National Conference on Science & Technology for Indigenous Development in India (28-30 Sep 2015) The Indian Science Congress Association: Haridwar Chapter & F.E.T., G.K.V., Haridwar.
16. "Role of Electron-Phonon in Semiconductor Devices" 103rd Indian Science Congress (3-7 Jan 2016) University of Mysore, Mysore.
17. "Thermal Conductivity of Nanomaterials-A Review" International Conference on Advances in Science, Engineering & Technology (29-30 Jan 2016).
18. "Transport Properties of Ideal Quantum Gas Using Four Particle Green Function" 5th National Conference on Chemical Sciences: Emerging Scenario & Global Challenges (26 March 2016) Department of Chemistry, Arya P.G. College, Panipat, Haryana.
19. "Temperature Dependent Thermal Conductivity of Superlattices" National Seminar on Managing Chemistry for Better Life (30 March 2016) Department of Chemistry, G.V.M. Girls College, Sonapat.

20. "Studies of Superlattice Thermal Conductivity and Phonon Transport" 4th International Conference on Science, Technology and Management(15 May 2016) India International Center, New Delhi.
21. "Comparison of Thermal Conductivity of Silicon Quantum Wells and Bulk" National Conference on Emerging Trends in Engineering & Sciences(16-17 May 2016) Institute of Engineering and School of Studies in Environmental Chemistry, Jiwaji University, Gwalior.
22. "Theory of Confined Phonon Transporting Quantum Wells" 19th International Conference of International Academy of Physical Sciences & Symposium on Fixed Point Theory and Dynamical Systems(17-19 Oct 2016) Department of Mathematics and Computer Science, DSB Campus, Kumaun University, Nainital.
23. "Study of Temperature Dependence Properties of GaAs" National Conference on Science & Technology For National Development(20-22 Nov 2016) The Indian Science Congress Association: Haridwar Chapter and Department of Chemistry, G.K.V., Haridwar.
24. "Thermal Transport in Superlattice for thermoelectric applications" National Conference on Science & Technology For National Development(20-22 Nov 2016) The Indian Science Congress Association: Haridwar Chapter and Department of Chemistry, G.K.V., Haridwar.
25. "Band Structure In Low Dimensional Structure" National Conference on Science & Technology For National Development(20-22 Nov 2016) The Indian Science Congress Association: Haridwar Chapter and Department of Chemistry, G.K.V., Haridwar.
26. "Thermal and Thermoelectric Transport in Nanostructure and Low Dimensional System" National Conference on Science & Technology For National Development(20-22 Nov 2016) The Indian Science Congress Association: Haridwar Chapter and Department of Chemistry, G.K.V., Haridwar.
27. "Study of Cloud Burst Events In Uttarakhand" 3rd International Conference on Recent Innovations in Science, Technology, Management and Environment(18 Dec 2016) Indian Federation of United Nations Associations, New Delhi.
28. "Temperature Dependent Thermodynamic Electron-Phonon Green Functions" 11th National Conference of the Indian Thermodynamics Society on Advances in Chemical Sciences and Thermodynamics(2-3 Dec 2016) Department of Chemistry, University of Jammu, Jammu.
29. "Theory of Phonon Dispersion and Group Velocities in Quantum Wells" 11th National Conference of the Indian Thermodynamics Society on Advances in Chemical Sciences and Thermodynamics(2-3 Dec 2016) Department of Chemistry, University of Jammu, Jammu.
30. "Study of Physical Properties of Semiconductor Quantum Well" 104th Indian Science Congress(3-7 Jan 2017) S. V. University, Tirupati.

31. "Quantum Confinement of Carriers in Low Dimensional Structures" National Conference on Latest Advancements in Physical Sciences and Life Sciences(18-19 March 2017) Department of Chemistry, Meerut College, Meerut.
32. "Thermal Properties of Nanomaterials" 6th National Conference on Chemical & Environmental Sciences(A Multi-Disciplinary Conference for all Discipline)(1 April 2017) The Indian Science Congress Association: Kurukshetra Chapter & Department of Chemistry, Arya P.G. College, Panipat, Haryana.
33. "Phonon Confinement and Interface Scattering in Semiconductor Nanostructures" International Conference on Frontiers at the Chemistry-Allied Sciences Interface(22-23 July 2017) Center of Advanced Study, Department of Chemistry, University of Rajasthan, Jaipur.
34. "Theory of Confined Phonon Transport in Quantum Wires" International Conference on Frontiers at the Chemistry-Allied Sciences Interface(22-23 July 2017) Center of Advanced Study, Department of Chemistry, University of Rajasthan, Jaipur.
35. "Effect of Magnetic Field on Germination of Seeds" 8th Conference of The Indian Science Congress Association: Haridwar Chapter(14-15 Oct 2017) Department of Mathematics and Department of Computer Science, D.S.B. Campus, Kumaun University, Nainital.
36. "Electric Field Effect on the Wound Healing of Plants" 8th Conference of The Indian Science Congress Association: Haridwar Chapter(14-15 Oct 2017) Department of Mathematics and Department of Computer Science, D.S.B. Campus, Kumaun University, Nainital.
37. "Length Dependence Thermal Transport in Low Dimensional Structure" 8th Conference of The Indian Science Congress Association: Haridwar Chapter(14-15 Oct 2017) Department of Mathematics and Department of Computer Science, D.S.B. Campus, Kumaun University, Nainital.
38. "Radon-A Silent Killer" National Conference on Recent Advances in Chemical Sciences(7 March 2018) Department of Chemistry, Maharshi Dayanand University, Rohtak.
39. "The Study of Optical Absorption in the Low Dimensional Systems" International Conference on Nanomaterials: Initiatives & Applications(9-11 March 2018) School of Studies in Environmental Chemistry & Institute of Engineering, Jiwaji University, Gwalior.
40. "Theory of Helmholtz free energy of Quantum Wells" 9th Conference of Indian Science Congress Association: Haridwar Chapter(13-14 Oct 2018) Department of Biological Sciences, CBS&H, G.B. Pant University of Agriculture and Technology, Pantnagar.
41. "Phenomena of Heat Transport in Nanoscale Semiconductors" 9th Conference of Indian Science Congress Association: Haridwar Chapter(13-14 Oct 2018) Department of Biological Sciences, CBS&H, G.B. Pant University of Agriculture and Technology, Pantnagar.

42. "Vibrational Spectra and Electron-Phonon Interaction" 1st Annual Conference of Society of Himalaya Action Research & Development on Recent Advances in Chemical and Nanosciences (29-30 Oct 2018) Department of Chemistry, HNB Garhwal University, BGR Campus, Pauri, Uttarakhand.
43. "Effect of Interaction In Raman Scattering" International Conference on Frontiers at the Chemistry-Allied Sciences Interface(21-22 Dec 2018) Department of Chemistry, University of Rajasthan, Jaipur.
44. "Future India: Science & Technology with Particular Reference To Renewable Energy Sources In India" 106th Indian Science Congress, Science Communicator Meet(5-6 Jan 2019) Lovely Professional University, Phagwara, Punjab.
45. "Effect of Impurities and Defect in Thermal Conductivity of PbS" 106th Indian Science Congress(3-7 Jan 2019) Lovely Professional University, Phagwara, Punjab.
46. "Many Body Techniques Applied to Quantum Wells and Superlattices" National Conference on Advanced Technologies and Environmental Safety(9-10 March 2019) IFTM University, Moradabad.
47. "The Lattice Anharmonicity and Optical Absorption in Crystals" International Conference on Emerging Trends in Engineering, Management & Sciences (27-28 April, 2019) Graphic Era Hill University, Bhimtal Campus, Nainital.
48. "Structural and Morphological Properties of Y doped ZnO Powder Sample by Sol-Gel Technique" National Conference on Science & Technology: Rural Development (15-16 February, 2020) Department of Chemistry & Department of Physics, Gurukul Kangri Vishwavidyalaya, Haridwar.
49. "Thermal Properties of Nanostructures" National Conference on Science & Technology: Rural Development (15-16 February, 2020) Department of Chemistry & Department of Physics, Gurukul Kangri Vishwavidyalaya, Haridwar.
50. "Transport Behavior of Nanowires" 1st International Conference of Indian Science Congress Association-Rohtak Chapter on Science & Technology: Rural Development (4-5 March, 2020) Department of Chemistry, MD University, Rohtak.
51. "Electron-Phonon Interaction in Two Dimensional System" 7th National Conference on Innovations in Science, Engineering & Technology (19 February,2022) Department of Chemistry, Arya P.G. College, Panipat, Haryana.
52. "Solar Water Heating System" DRDO Sponsored 2nd National Conference on Advanced Technologies and Environmental Safety-2022 (23-24 July,2022) IFTM University, Moradabad.
53. "A Review of the Rare Earth Doped Metal Oxide Semiconductors for the Enhancement of the Structural, Morphological, Optical and Electrical Properties" International Conference on Multidiscipline Academic Research and Innovation Jointly Organized by Aryabhat Institute of Academics and Research, Lucknow and Goel Institute of Higher Studies Mahavidyalaya on September 10-11,2022

54. "Study of I-V Characteristics of Solar Modules" International Conference on Green Technology: Issues & Challenges Jointly Organized by Center for International Cooperation, Ch. Charans Singh University, Meerut & ISCA Haridwar Chapter September 22-24, 2022
55. "An Assessment of Noise Pollution In Different Areas of Haridwar Region" International Conference on Green Technology: Issues & Challenges Jointly Organized by Center for International Cooperation, Ch. Charans Singh University, Meerut & ISCA Haridwar Chapter September 22-24, 2022
56. "Radon Concentration In Ground Water and Its Removal By Various Physical Processes" International Conference on Environment and Human Health:Global Issues,Organized by Department of Botany and Microbiology,Gurukul Kangri Deemed to be University,Haridwar December 7-8,2022
57. "The Multifunctional properties of Semiconductors" 108th Indian Science Congress, Organized by Rashtrasant Tukadoji Maharaj, Nagpur, Maharashtra January 3-7,2023
58. "Cu,Mo-doped and Pristine BiVO₄ nanoparticles prepared by Sol-Gel Process for Photocatalytic applications"&"Effect of Dopant on structural, Optical and Morphological properties of Vanadium pentoxide nanoparticles synthesized by Sol-Gel method" National Conference on Science & Technology for all, Organized by The Indian Science Congress Association:Haridwar Chapter,Hosted by Department of Chemistry & Department of Physics,Department of Ancient Indian History,Culture & Archaeology,Gurukul Kangri Deemed to be University,Haridwar March 19,2023
59. "Vedic Science and its Relevance with Modern Science" National Conference on Knowledge, Cultural Traditions & Practices of India,Sponsored by Ministry of Culture, Govt. of India, New Delhi, Organized by Gurukul Kangri Deemed to be University,Haridwar,March 29-31,2023
60. "Phenomenon of Heat Conduction in Si Nanowires" International Conference on Frontiers at the chemistry-Allied Sciences Interface,Jointly Organized by Department of Chemistry, University of Rajasthan, Indian Society of Chemists and Biologist:Rajasthan Chapter, Chemical Research Society of India:Rajasthan Chapter, April 20-21,2023
61. "Aloe Vera:A Miracle Plant" International Conference on Microbial Innovations for Synergistic Advancements,Organized by School of Life Sciences,SBS University,Dehradun,Uttarakhand,India,September 17-18,2024
62. "Analysis of Sintered Ceria By Rietveld Refinement & Electron Density Distribution" International Conference on NanoMaterial & Green Technology for Sustainability Quality Innovations & Challenges, Organized by School of Applied & Life Sciences, Uttaranchal University, Dehradun,October 25-26, 2024
63. "Effect of dopant on structural, optical, and morphological properties of vanadium pentoxide nanoparticles synthesized by sol-gel method" International Seminar on Current Environmental Issues for Sustainable Circular Economic Strategies and Fisheries Development for a Greener Tomorrow,Organized by Department of Zoology and

Environmental Sciences, Gurukul Kangri Deemed to be University collaboration with Indian Academy of Environmental Sciences January 28-29, 2025

Attended Workshops:

1. One Day Workshop on “Publishing Quality Research Papers and Books” (20th February, 2020) Faculty of Management, Gurukul Kangri Vishwavidyalaya, Haridwar.
2. National one week Faculty Development Programme on ICT Tools for Effective Teaching Learning (23rd May, 2022 to 28th May, 2022) Amar Sewa Mandal's Kamala Nehru Mahavidyalaya, Nagpur.
3. Three Day International Virtual Workshop on Research Article Writing and publication in High Impact Journals, Jointly Organized by Lavender Literary Club, India, Cape Comorin Trust, India, Malaysian Industrial Relations & Human Resource Association, Malaysia from 5-7 August, 2022.
4. One Day Online Lecture on “National Education Policy 2020: Changing Role of Teachers” Organized by UGC-HRDC, Guru Nanak Dev University, Amritsar (08-09-2022)
5. FDP on “Academic Leadership” Organized by All India Council For Technical Education Training and Learning (ATAL) Academy Blended/Hybrid from September 19-30, 2022

Publications:

1. **Richa Saini**, “Phonon Conduction in InAs Quantum Well”, Lucknow Journal of Science, Vol.8, No.2, 2011, 0974-8121.
2. **Richa Saini**, Vinod Ashokan, B.D. Indu and R Kumar, Phonon Heat Transport In Gallium Arsenide, PRAMANA- Journal of Physics, Vol.78, No.3, March 2012, pp-459-468, 0304-4289 (Online 0973-7111) Peer reviewed (Scopus indexed) (IF-2.219)
<https://www.ias.ac.in/article/fulltext/pram/078/03/0459-0468>
3. **Richa Saini**, Vinod Ashokan and B D Indu, The Electron-Phonon Problem in Quantum Wells, International Journal of Advances in Science and Technology, Vol. 6, No. 1, January 2013, pp 22-25, 2229-5216, Peer reviewed
4. **Richa Saini**, Vinod Ashokan, B D Indu, Transport Phenomena in Semiconductor Quantum Wells, Research Journal of Physical Sciences, Vol. 4, May 2013, pp 1-6, 2320-4796, Peer reviewed http://www.isca.in/PHY_SCI/v1i4.php
5. **Richa Saini**, Vinod Ashokan, B D Indu, Phonon Conduction in Superlattices, Elsevier: Superlattices & Microstructures, Vol. 82, March 2015, pp 574-583, 0749-6036, Peer reviewed, (Scopus indexed), 23392 (IF-2.658)
<https://doi.org/10.1016/j.spmi.2015.03.013>
6. RD Kaushik, Jaspal Singh, **Richa Saini**, Kavita Rawat and Ekata Kumari, Mnii Catalyzed Oxidation Of P-Bromoaniline By Periodate Ion: A Kinetic and Mechanistic Study, Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol. (8)3,

- May-June 2017, pp 1264-1272 [Cambridge International Academics] [Bimonthly], 0975-8585, Peer reviewed https://www.rjpbcs.com/2017_8.3.html
7. R D Kaushik, Jaspal Singh, Malvika Chawla, **Richa Saini**, and Ekata Kumari, Microgram Determination of Periodate: Application of Its Reduction By P-Phenetidine, Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol. 8(3), May-June 2017, pp 1475-1482 [Cambridge International Academics] [Bimonthly], 0975-8585, Peer reviewed https://www.rjpbcs.com/2017_8.3.html
 8. R D Kaushik, Jaspal Singh, Payal Rathi, **Richa Saini**, and Ekata Kumari, Kinetic-spectrophotometric determination of MnII in nanograms based on its catalytic effect on periodate oxidation of N, N-dimethyl-p-toluidine, Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol. 8(3), May-June 2017, pp 1570-1576 [Cambridge International Academics] [Bimonthly], 0975-8585, Peer reviewed https://www.rjpbcs.com/2017_8.3.html
 9. Jaspal Singh, R. D. Kaushik, Om Singh, **Richa Saini** and Ekata Kumari, Stopped flow kinetics of MnII catalyzed Periodate Oxidation of o- Anisidine – First Report on Stability constant of the ternary Intermediate complex formation, International Journal of ChemTech Research, Vol.10, No.6, 2017 ,pp 228-240 [Asian Publication Corporation] [Monthly], 0974-4290, (Online): 2455-9555, Peer reviewed
 10. R. D. Kaushik, Jaspal Singh, **Richa Saini**, Priyanka Tyagi and Ekata Kumari, NEW METHOD FOR MICROGRAM DETERMINATION OF *p*-PHENETIDINE, Rasayan Journal of Chemistry, Vol. 10, No. 2, April - June 2017 pp368 -374 [Rasayan Journal] [Quarterly: March, June, September & December], 0974-1496 Online: 0976-0083, Peer reviewer (Scopus indexed) (IF-1.231)
 11. Jaspal Singh, RD Kaushik, Priyanka Tyagi, **Richa Saini** and Ekata Kumari, Application of Periodate - *p*-Phenetidine Reaction for Nanogram Determination of MnII, Journal of Chemical and Pharmaceutical Research, Vol.9(6), 2017, pp 74-79 [JOCPR][12], 0975-7384, Peer reviewed.
 12. **Richa Saini**, Hydrogen Fuel Cell, ESSENCE - International Journal for Environmental Rehabilitation and Conservation, Volume VIII, No. 1, 2017, pp 108 – 119 [Publisher: MANU – International Council for Man and Nature] [Publication Frequency: Bi-Annual [June | December], 0975-6272, Peer reviewed https://essence-journal.com/wp-content/uploads/Volume_VIII/Issue_1/Hydrogen-fuel-cell.pdf.
 13. **Richa Saini** and Ankita Rani Chauhan, Thermal Conductivity of Nanoscale Materials: A Review, JOURNAL OF ULTRA SCIENTIST OF PHYSICAL SCIENCES, JUSPS-B, Vol. 29(7), July 2017 pp 163-170 [Publisher: Ansari Education and Research Society] <http://www.ultraphysicalsciences.org/paper/827/thermal-conductivity-of-nanoscale-materials-a-review>, 2231-3478 Online: 2319-8052, Peer reviewed.
 14. **Richa Saini**, Effect of impurities and defect in thermal conductivity of lead sulphide, Pramana-Journal of Physics, August 2020, 94(1), 117,

<https://www.ias.ac.in/article/fulltext/pram/094/0117>, 0304-4289, Peer reviewed, Scopus indexed, (IF-2.219)

15. Kumud Choudhary, **Richa Saini**, Gaurav K. Upadhyay, Vijay S. Rana, L.P. Purohit, Wrinkle type nanostructured Y-doped ZnO thin films for oxygen gas sensing at lower operating temperature, Materials Research Bulletin, (06/04/2021) <https://doi.org/10.1016/j.materresbull.2021.111342>, 0025-5408, Peer reviewed, Scopus indexed (IF-5.600)
16. Kumud Choudhary, **Richa Saini**, Gaurav K. Upadhyay, L.P. Purohit, Sustainable behavior of cauliflower like morphology of Y-doped ZnO: CdO nanocomposite thin films for CO₂ gas sensing application at low operating temperature, Journal of Alloys and Compounds (21/05/2021) <https://doi.org/10.1016/j.jallcom.2021.160479>, 0925-8388, Peer reviewed, Scopus indexed, (IF-6.371)
17. **Richa Saini**, Ankita R. Chauhan, “Heat transport in nanowires”, 3rd International Conference on Condensed Matter and Applied Physics (ICC-2019) AIP Conf. Proc. Vol.2220, (05/05/2020), 9780735419766, Scopus Indexed <https://doi.org/10.1063/5.0001650>
18. Anshu Singh, **Richa Saini**, Pawan Kumar, Razia Nongjai, R. C. Meena and K. Asokan, “Effect of sintering temperature on the structural and optical properties of cerium oxide nanoparticles”, 3rd International Conference on Condensed Matter and Applied Physics (ICC-2019) AIP Conf. Proc. Vol.2220, (05/05/2020), 9780735419766, Scopus Indexed <https://doi.org/10.1063/5.0001976>
19. Dinesh Kumar, Nazir Ahmad, Vipin Kumar, Vikash Kumar Jha, Shobha Kulshrestha, **Richa Saini** and M. S. Shekhawat “Various polarization mechanisms involved in ionic crystals”, 3rd International Conference on Condensed Matter and Applied Physics (ICC-2019) AIP Conf. Proc. Vol.2220 (05/05/2020), 9780735419766, Scopus Indexed <https://doi.org/10.1063/5.0003510>
20. A R Chauhan, B D Indu and **R Saini**, Theory of thermal conductivity in low-dimensional structures, Indian J Phys, 0973-1458(Print); 0974-9845(Web), (IF-1.947) <https://doi.org/10.1007/s12648-021-02236-5>
21. **Richa Saini**, Ankita R. Chauhan, Phenomenon of heat conduction in Si nanowires, Applied Physics A (2022) 128:344, 1432-0630(Online), (IF-2.584) <https://doi.org/10.1007/s00339-022-05418-y>
22. Ankita R. Chauhan, B.D. Indu, **Richa Saini**, A Nanophysical Approach to Thermal Transport, AIP Conf. Proc. 2352, 040008-1–040008-5; Published by AIP Publishing, 978-0-7354-4105-7, <https://doi.org/10.1063/5.0053172>
23. **Richa Saini**, Ankita R. Chauhan, Anita Chamola, “Intraband and Interband Transition and Absorption in Quantum Well”, Applied Research Development in Physical and Chemical Sciences and Engineering, 978-93-91248-49-9, <http://www.mkspublications.com>

24. Anshu Singh, **Richa Saini**, Pawan Kumar and Ashokan Kandasami “Tailoring of Defects Dependent Magnetic Properties of Swift Heavy Ion Irradiated CeO_2 for Spintronics Application”, Journal of Applied Physics, 132,125901 (2022) <https://doi.org/10.1063/5.0088882>
25. Anshu Singh, **Richa Saini**, Pawan Kumar, Mukul Gupta and Asokan Kandasami “**Tunability of bandgap from UV to visible region by transition metal ion implantation in CeO_2 and their electronic structures**”,Phys. Scr. 98 (2023) 075907, <https://doi.org/10.1088/1402-4896/acd822>
26. Kumud Choudhary,**Richa Saini**,L.P. Purohit “**Controllable synthesis of Ce-doped ZnO : TiO_2 nanospheres for photocatalytic degradation of MB dye and levofloxacin under sunlight light irradiation**”, Optical Materials, 143 (2023) 114167 <https://doi.org/10.1016/j.optmat.2023.114167>
27. Udeshwari Jamwal,Annupriya Dhiman, Nishtha Chaudhry, Dharmendra Singh, K. L. Yadav, **Richa Saini**“**A Study to Investigate the Influence of γ Radiation on Microwave Absorption Characteristics of Barium Titanate/Exfoliated Graphite Nanocomposite**” Conference: 2023 International Conference on Electrical, Electronics, Communication and Computers (ELEXCOM) At: IIT Roorkee,Publish IEEE January (2024), DOI: [10.1109/ELEXCOM58812.2023.10370423](https://doi.org/10.1109/ELEXCOM58812.2023.10370423)
28. **Richa Saini** and Kumud Choudhary, “**Toxic potential of azo dyes: A broader understanding**”, Hazardous Chemicals Overview, Toxicological Profile, Challenges,and Future Perspectives,ISBN:978-0-323-95235-4,Academic Press,United States(2024)
29. Shilpa Chauhan , Anshu Singh, **Richa Saini** , Logu Thirumalaisamy , Jayaraman Ramakrishnan , Thanigai Arul Kumaravelu d,e, Thangavel Rajalingam Chung-Li Dong , Asokan Kandasami, “Regulation of oxygen vacancies by gamma-irradiation in $BiVO_4$ thin films and their electrochemical performance”, Ceramics International, (2025) <https://doi.org/10.1016/j.ceramint.2025.02.098>

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