LIST OF PUBLICATIONS:

I. PUBLICATIONS IN INTERNATIONAL REFEREED JOURNALS (18):

1. Surbhi Sharma., **Neetu Verma**, &**C. K. Jayasankar**, (2026). Comprehensive Study of Thermal, Optical, and Photoluminescence Properties of Pr3+-Doped Borotellurite Glasses for Optical Amplifiers. Physica B: Condensed Matter, 418637.

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2. Gurdeep Kaur, Lavleen Saini, Sandeep Kaur, Shivani Singla, **Neetu Verma** (2026) "The Effect of Gold Nanoparticles on the Structural, Optical, and Emission Properties of Dy3+-Doped Bismuth Borosilicate Glasses and Glass Ceramics" *physica status solidi (b), 2026; 263:e202500636*

   Link:https://onlinelibrary.wiley.com/doi/abs/10.1002/pssb.202500636

3. Anchal Pathania, **Neetu Verma**, Rohit Mehra, P. Nandi, Gopi Sharma, Sandeep Kaur, Richa Mishra, B. Sanyal (2025) "Environmentally safe high density lanthanum doped glasses for radiation shielding windows." *Journal of Non-Crystalline Solids*, Volume **666, 2025, 123649**

   Link:https://www.sciencedirect.com/science/article/pii/S0022309325002649?dgcid=coauthor

4. Surbhi Sharma, **Neetu Verma**, and C. K. Jayasankar (2025) "Advancing Waveguide Laser Performance: An In-Depth Analysis of the Physical, Thermal, and Spectroscopic Properties of Sm3+-Doped Borotellurite Glasses."*Luminescence* 40.5:e70182.

   Link:https://analyticalsciencejournals.onlinelibrary.wiley.com/doi/10.1002/bio.70182

5. Haramanpreet Kaur, Ruturaj Puranik, Vibhavari Parkar, Snehal Haldankar, Fathimath Faseela, Shriganesh Prabhu, Sandeep Kaur, **Neetu Verma**, Gopi Sharma, Terahertz-time domain spectroscopy and optical characterization of germanate glass systems for photonic applications, Journal of Non-Crystalline Solids, Volume **650, 2025, 123369.**

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6. Shivani Singla, Nancy Mahendru, Om prakash Pandey, **Neetu Chopra**, Gopi Sharma, (2024) Role of SiO2 in tailoring stability and non linear optical behaviour of gold nanoparticles in glass, Phys.Scr.99:055504

Link: https://iopscience.iop.org/article/10.1088/1402-4896/ad3493

7. Shivani Singla, Abhishek, Naveen Bansal, **Neetu Chopra**, Gopi Sharma "Analysis of gold nanoparticles dispersed bismuth borate glass:, Effect of size and concentration". Journal of Material Science: Material in Electronics, vol. 34, pp. 526, 2023.

Link:https://www.springerprofessional.de/en/analysis-of-gold-nanoparticles-dispersed-bismuth-borate-glass-ef/24024868

8. S. Sharma, **N. Verma**, S. Kaur(2023), Investigation of Dysprosium incorporated Potassium Boro-Tellurite glasses towards radiation screening and photonic applications, Physica Status Solidi A, **220, 2200715**

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9. Sandeep Kaur, O. P. Pandey, C.K.Jayasankar, **Neetu Chopra**, (2022), Exploring thermal, optical, structural and luminescent properties of gamma irradiated Dy^{3+} doped tellurite glasses: Photon shielding properties, Radiation Physics and Chemistry, **199, 110375**

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10. Shivani Singla, Sandeep Kaur, Nancy Mahendru, O.P. Pandey, **Neetu Chopra**, G. Sharma (2022), Enhanced photoluminescence in Dy3+/Au co-doped bismuth borosilicate glass, Optical Materials, **126, 112236**
Link: https://www.sciencedirect.com/science/article/abs/pii/S0925346722002701

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Link: https://www.sciencedirect.com/science/article/abs/pii/S0022231321001472

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Link: https://www.sciencedirect.com/science/article/abs/pii/S0022309319303370

14. N. Chopra, S. Kaur, M. Kaur, S. Singla, Ritika, G. Sharma, M. S. Heer, **(2018)** Optical, Physical and structural properties of Er^{3+} doped low phonon energy vitreous matrices: $ZnO\text{-}B_2O_3\text{-}TeO_2$, Physica status solidi (a), **1700934 (1-7)**.
Link: https://onlinelibrary.wiley.com/doi/abs/10.1002/pssa.201700934

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16. N.Chopra, N.P.Singh, G. Sharma, **(2012)** "Comparative Study for Structure of Alkali Borate Glasses with and without Aluminum Oxide – Density Measurements" *Research & Review : Journal of Physics*, 1(1), pp: 1-10. With ISSN: 2278 – 2265
Link: http://sciencejournals.stmjournals.in/index.php/RRJoPHY/article/view/791

17. G.Sharma, N.Chopra, N.P.Singh, S.Baccaro, M.Falconieri, **(2012)** "Qualitative Analysis of Radiation Induced Structural Changes in Alkali Aluminoborate Glasses: Raman Spectroscopy" *Trans. Ind. Ceram. Soc.,* 71(4), pp: 198-203.
Link: https://www.tandfonline.com/doi/abs/10.1080/0371750X.2013.772742

18. J.Singh, G.Singh, N.Chopra, G. Singh, G. Sharma, **(2009)** "Structural Characterization of fly ash doped lithium borate glasses", *Asian Journal of Chemistry*, 21(10), pp:153-155.
Link:https://www.semanticscholar.org/paper/Structural-Characterization-of-fly-ash-doped-borate-Singh-Singh/f672eb3237bb25aa0000da4b7630c502780d4eaf

PAPERS PUBLISHED AS CONFERENCES PROCEEDINGS IN INTERNATIONAL CONFERENCES (5):

1. Sharma, S., & Verma, N. (2025). Optimizing gamma radiation shielding in Pr3+ doped boro-tellurite glasses: a study of attenuation properties and performance. In *Journal of Physics: Conference Series* (Vol. 2944, No. 1, p. 012009). IOP Publishing.
2. Neetu Chopra, Sandeep Kaur, O P Pandey, Gopi Sharma, Surbhi Sharma, Physical, optical and structural characterizations of Dy^{3+} - doped lead borate glasses, *IOP Conf. Ser.: Mater. Sci. Eng.* 1114 (2021) 012098.
https://iopscience.iop.org/article/10.1088/1757-899X/1114/1/012098
3. N. Chopra, N. P. Singh, S. Baccaro, M. Falconieri, G. Sharma, **(2013)** "Influence of gamma irradiation and aluminum addition on Raman Spectra of sodium borate

glasses", *International Conference on Production and Industrial Engineering (CPIE 2013), 29-31st March,2013 at B.R. Ambedkar National Institute of Technology, Jalandhar, India,* Journal of Material Engineering (Inderscience Publications). Proceeding ISBN- 978-93-81693-51-3.

4. N. Chopra, N. P. Singh, S. Baccaro, G. Sharma, **(2012)** "Structural analysis on network modifying role of Al_2O_3 in K_2O-B_2O_3 glass network: Before and after γ-irradiation", *International Conference on Biomedical Engineering & Assitive Technologies, Dec 6-7,2012 at B.R. Ambedkar National Institute of Technology, Jalandhar, India.* Proceeding ISBN-13: 978-81-925454-1-7

5. N. Chopra, N. P. Singh, G. Sharma, **(2012)** " Structural characterization with and without alumina in sodium borate glasses" *International Conference on Mechanical and Industrial Engineering (ICMIE), 8th April 2012 at Goa organized by Interscience Institute of Management & Technology, Kanatabada (Orissa), India.* Proceeding ISBN- 978-93-81693-51-3.

PAPERS PUBLISHED AS CONFERENCES PROCEEDINGS IN NATIONAL CONFERENCES (3):

1. Neetu Chopra, Ankita, (2021) "Blended Teaching Learning: The Future of Education" National e conference on Blended Learning: The future of Education, 2nd February, Amity University Uttar Pardesh in Amity international Journal of Teacher Education, Vol 7, No 1 April 2021, ISSN: 616X

2. S. Kaur, O. P. Pandey, G. Sharma, M. Singh, N. Chopra, (2019) "Optical and thermal characterization of Dy^{3+} doped sodium borotellurite glasses" National conference on *Emerging Scenario in Basic and Applied Sciences for sustainable development,* April 5, 2018,DAV. Bathinda (Punjab), India. Proceeding ISBN- 978-93-87279-93-2.

3. R. Bagga, M. Falconieri, A. Goel, N. P. Singh, Nancy, N. Chopra, G. Sharma (2012) "Luminescence spectroscopic investigation on distribution of Eu^{3+} in nano structured glass ceramics" 2012, Lovely Professional University, Phagwara (Punjab), India.

PAPERS PRESENTED IN INTERNATIONAL CONFERENCES (18):

1. Haramanpreet Kaur, Ruturaj Puranik, Vibhavari Parkar, Shriganesh Prabhu, Sandeep Kaur, **Neetu Verma** and Gopi Sharma, " Effect of concentration of rare earths on the terahertz and optical properties of aluminosilicate glasses", International conference on*Science, Technology and Applications of Rare Earths (ICSTAR-2025),* April 21-23, 2025 at S.V. University, Tirupati (India).

2. Anchal Pathania, Sandeep Kaur, Rohit Mehra, P. Nandi, **Neetu Verma**, "Influence of rare earth elements on the radiation shielding properties of lead-free glass materials", International conference on*Science, Technology and Applications of Rare Earths (ICSTAR-2025),* April 21-23, 2025 at S.V. University, Tirupati (India).

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4. Simaranjeet Kaur, Priya, Haramanpreet Kaur, Sandeep Kaur, **Neetu Verma**, Gopi Sharma, "Investigating the effects of thermal treatment on the optical properties of broken door", International conference on*Science, Technology and Applications of Rare Earths (ICSTAR-2025),* April 21-23, 2025 at S.V. University, Tirupati (India) under poster presentation.

5. Anchal Pathania, Sandeep Kaur, Gopi Sharma, Rohit Mehra, P. Nandi, **Neetu Verma**, "Effects of rare earth elements on radiation shielding properties on different glass formers", XXVII International Congress on Glass (ICG-2025), Jan 20-24, 2025 at Kolkata, India. Presented under poster presentation.

6. **Neetu Verma**, Surbhi Sharma, Anchal Pathania, "Analysis of enhancement in gamma ray shielding proficiency with samarium in lead free potassium boro-tellurite glass system", International conference on "Applied Mechanics and Mathematics (ICAMM-24)", 22-23 Nov, 2024, Melbourne, Australia

7. Surbhi Sharma, **Neetu Chopra**, "Absorption and Emission Spectra of Borotellurite Glasses Doped with Dysprosium Oxide," International conference on

"Functional Materials and Simulation Techniques," 10th-11th Jan, 2022 at Chandigarh University

8. S. Kaur, O.P. Pandey, **N. Chopra,** International conference on*sciences, technology and applications of rare earths,* September 23-25, 2018 at S.V. University, Tirupati (India).

9. D. Kaur, G. Sharma, M. Singh, **N. Chopra*,** International Conference on Recent Advances for Quality Advances in Science and Technology, January 16-17, 2017 at Hans Raj Maha Vidyalaya, Jalandhar, India presented as poster presentation.

10. **N. Chopra**, International Conference on Globalization of market: Emerging Challenges, 27th January, 2016 at KMV Jalandhar.

11. D. Kaur, G. Sharma, M. Singh, **N. Chopra*,** International Conference on Production and Industrial Engineering,December 19-21, 2016 at B.R. Ambedkar National Institute of Technology, Jalandhar, India.

12. **N. Chopra**, International Conference on youth concerns and challenges, 25-26th March, 2016 at KMV, Jalandhar.

13. **N. Chopra**, N.P.Singh, S. Baccaro, M. Falconieri, G. Sharma, **(2013)** "Influence of gamma irradiation and aluminum addition on Raman Spectra of sodium borate glasses", *International Conference on Production and Industrial Engineering (CPIE 2013), 29-31st March,2013 at B.R. Ambedkar National Institute of Technology, Jalandhar, India.* Presented under oral presentation.

14. **N. Chopra**, N.P.Singh, S. Baccaro, G. Sharma, **(2012)** "Structural analysis on network modifying role of Al_2O_3 in K_2O-B_2O_3 glass network: Before and after γ-irradiation", *International Conference on Biomedical Engineering & Assitive Technologies, Dec 6-7,2012 at B.R. Ambedkar National Institute of Technology, Jalandhar, India.* Presented under oral presentation and got Best Technical Session Paper Award*.*

15. **N. Chopra**, N.P.Singh, G. Sharma, **(2012)** "Structural characterization with and without alumina in sodium borate glasses" *International Conference on Mechanical and Industrial Engineering (ICMIE), 8th April 2012 at Goa rganized by Interscience*

Institute of Management & Technology, Kanatabada (Orissa), India. Presented under oral presentation and got Young Investigator Award.

16. **N. Chopra**, N.P.Singh, G. Sharma, **(2010)** "Radiation induced coefficient on alkali aluminoborate glasses: Gamma Irradiation" *International Conference on Environmental Challenges, 15th-16th Oct.2010 at Kanya Maha Vidyalaya, Jalandhar, India.* Presented under poster presentation.

17. **N. Chopra**, N.P.Singh, G. Sharma, **(2009)** "Optical and Physical Characterization of alkali borate glasses" *International Symposium on Nanostructured Mateials, 28th-29th Oct.2009 at Kanya Maha Vidyalaya, Jalandhar, India.* Presented under poster presentation.

18. **N. Chopra**, N.P.Singh, G. Sharma, **(2009)** "Optical Characterization of sodium borate glasses with different glass modifier" *International Symposium on Nanostructured Mateials, 28th-29th Oct.2009 at Kanya Maha Vidyalaya, Jalandhar, India.* Presented under poster presentation.

PAPERS PRESENTED IN NATIONAL CONFERENCES (16):

1. Surbhi Sharma, Neetu Verma, (2025), "Tailoring the Optical Properties of Sm Doped Borotellurite Glasses for Optical Communications", In 2nd National Conference on Frontiers in Theoretical & Experimental Physics, Sept 11-12, 2025 at DAV Jalandhar. Presented under Oral presentation.

2. Surbhi Sharma, Neetu Verma, Anchal Pathania, (2024), " Influence of Dysprosium Doping on the properties of Alkali Boro-Tellurite Glasses: Structural, Optical and Thermal Insights", In National Conference on Frontiers in Theoretical & Experimental Physics, Sept 18-19, 2024 at DAV Jalandhar. Presented under Oral presentation.

3. Tanvi sharma, Ananya , Surbhi Sharma, Neetu Chopra, (2022), "Physical. Thermal and optical analysis of dysprosium doped borotelluite glasses" , In National conference on Recent advances in science and technology for sustainable development on 5th march 2022 at DAV Bathinda

4. Neetu Chopra, Ankita, (2021) "Blended Teaching Learning: The Future of Education" National e conference on Blended Learning: The future of Education, 2nd February, Amity University Uttar Pardesh

5. Sakhi, Komalpreet, Neetu Chopra, Gopi sharma, Sandeep Kaur, (2020) " Effect of dysprosium on the physical and optical properties of zinc borotellurite glasses", National Students' Conference on Spectroscopy, 16-17 Oct 2020 at GNDU Amritsar by Chemical Research Society of India, Local Chapter Chandigarh/Amritsar.

6. S. Kaur, O.P. Pandey, **N. Chopra**, (2019) "Spectroscopic studies of dysprosium doped sodium borotellurite glasses" *National symposium on nanostructured materials: structure, properties and applications,* 22-23 February, 2019 at KMV, Jalandhar, India

7. P. Padam, A. Kaur, S. Tandon, **N. Chopra**, (2019) "Preparation and characterization of Hydrogels" *National symposium on nanostructured materials: structure, properties and applications,* 22-23 February, 2019 at KMV, Jalandhar, India

8. S. Kaur, O.P.Pandey, G. Sharma, M.S. Heer, **N. Chopra**, **(2018)** "Optical, thermal and structural characterization of Dy^{3+} doped zinc borotellurite glasses" *National conference on Materials Science Application in Energy and Environment'* 17, March 2018 at DAV College, Jalandhar, India. Presented under Poster Presentation.

9. S. Kaur, O.P.Pandey, G. Sharma, M.S. Heer, **N. Chopra**, **(2018)** "Optical and thermal characterization of Dy^{3+} doped sodium borotellurite glasses" *National conference on Emerging Scenario in Basic and Applied Sciences for sustainable development'* April 5,*2018* at DAV College, Bathinda, India.

10. **N. Chopra** (2015), Relevance of E-education in Physics *"Relevance of E-education in Physics, national seminar on higher education; ensuring quality through teaching, learning and evaluation"* 18-19 September, 2015 at KMV, Jalandhar.

11. **N. Chopra**, G. Sharma, N.P. Singh (2015), UV-Vis investigation of lithium almino-borate glasses before and after gamma irradiation, "*19th National conference on solid state nuclear track detectors and their applications*" 19-21st November, 2015 at NIT Jalandhar

12. **N. Chopra**, G.Sharma, N.P.Singh, (2014) "Role of cation in irradiation induced structural changes in alkali borate glasses" National conference on Emerging trends in

basic and applied sciences, 6-7 March, 2014, at DAV, Jalandhar. Presented under Oral Presentation.

13. N. Chopra, (2014) "E-learning and novel methods in teaching Physics", *National (IAPT) Annual convention and symposium*, 10-12th October, 2014, S.G.G.S. College, Chandigarh.

14. R.Bagga , M. Falconieri, V.G. Achanta, J.M. F. Ferreira, A. Goel , N.P. Singh, Nancy, **N. Chopra**, G. Sharma, **(2012)** "Luminescence Spectroscopy Investigations on Distribution of Eu^{3+} in Nanostructured Glass Ceramics" *3rd Bhartiya vigyan sammelan and Expo, 11-14th Oct,2012 at Lovely Professional University, Phagwara, India.* Presented under Oral Presentation.

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