Dr. Parambir Singh Malhi

Assistant Professor

Department of Apparel and Textile technology, Guru Nanak Devuniversity, Amritsar-143005

Cell: (91) 8727900788, parambirmalhi@gmail.com

Presently working as Assistant Professor

- B.Tech in Textile Chemistry from Guru Nanak Dev Univeristy Amitsar, India.
- M.Tech in Fiber Science and Technology from Indian Institute of Technology Delhi (IIT Delhi), Delhi, India.
- PhD in Chemistry from Guru Nanak Dev University, Amritsar, India.

Research Interests: Perovskite materials & its composites synthesis and Characterization, Magnetic Properties, Dye degradation using perovskite materials, Application of perovskite materials on fibers and textile material for Mutliferroic and microwave Properties

Research Projects:

Sr. No.	Title	Agency	Period	Grant/ Amount Mobilized (Rs Lakhs)	Status
(1)	Environment friendly energy efficien materials for modern refrigeration	Rusa2.0	2019-2021	14,50,000/-	Completed

Students Supervised:

S. No.	Class	Degree	No. of Students
(1)	M.Sc (FYIP)	Chemistry	10
(2)	M.Sc (2 years)	Chemistry	15
(3)	B.Tech	Textile Chemistry	15
(4)	B.Tech	Textile Processing Technology	8

Publications: Publication List of Dr. Parambir Singh Malhi

1. **Parambir Singh Malhi**, Sachin Kumar, Mandeep Singh, Anupinder Singh, Ashwani Kumar Sood. *Finite control of dielectric constant with magnetic field in Sm-dopedBa-Co U-type hexaferrites*. **Processing and Application of Ceramics**. 17 [4] (2023) 333–346
2. Swati Verma, Anupinder Singh, Sandeep Sharma, Paramjit Kaur, Sachin Kumar Godara, **Parambir Singh Malhi,** Jahangeer Ahmed, P.D. Babu, Mandeep Singh. *Magnetic and Structural Analysis of BaZnxZrxFe12-2xO19 (x = 0.1 - 0.7) Hexaferrite Samples for Magnetic Applications*. **Journal of Alloys and Compounds**. 930, (2023), 167410
3. Sachin Kumar Godara, Himanshi, Rohit Jasrotia , Varinder Kaur, **Parambir Singh Malhi**, Jahangeer Ahmed, Abhishek Kandwal , Swati Verma, Mandeep Singh, Paramjit Kaur, Rahul Kumar Dhaka, Kirti Chuchra, Abu ul Hassan S. Rana, Ashwani Kumar Sood, Karuna Sharma, Sarita Dhaka, Ankit Verma. *A sustainable approach for the synthesis of $PbFe_{12}O_{19}$ materials using tomato pulp as a fuel: Structural, morphological, optical, magnetic, and dielectric traits.* **Journal of Magnetism and Magnetic Materials**. 573 (2023) 170643
4. **Parambir Singh Malhi,** Sachin Kumar, Sunil Kumar, Anupinder Singh, Ashwani Kumar Sood. *Influence of Ba-La hexaferrite on Magnetic, Mechanical and Microwave Properties of PU/PMMA Interpenetrating Polymer Network.* **3rd International conference, Emerging Trends in Traditional and Technical Textiles. NIT Jalandhar, India,** April 2023.
5. Shubhpreet Kaur, Mehak Arora, Lovish Sharma, Sunil Kumar, **Parambir Singh Malhi,** Mandeep Singh and Anupinder Singh. *Hopping Mechanism and Impedance Properties of Mg Doped NBT-KBT Solid Solution near Ambient Temperature.* **ECS J. Solid State Sci. Technol.** 11 [10] (2022) 103010
6. Sachin Kumar Godara, Mankamal Preet kaur, Varinder Kaur, **Parambir Singh Malhi**, Mandeep Singh, Swati Verma, Rohit Jasrotia, Jahangeer Ahmed, Mohaseen S. Tamboli, Ashwani Kumar Sood. *Investigation of microstructural and magnetic properties of Ca2+ doped strontium hexaferrite nanoparticles.* **Journal of King Saud University-Sciences**. 34 [1], (2022) 101963 DOI: 10.1016/j.jksus.2022.101963

7. **Parambir Singh Malhi**, Anupinder Singh, Mandeep Singh, Sachin Kumar, Shubhpreet Kaur, Mehak Arora and Ashwani Kumar Sood. *Enhanced Magneto-dielectric Response in La-doped Co_2U Hexaferrite.* **Journal of Advanced Dielectrics**. 6(2021) 2150026
8. Ravleen, Sachin Kumar Godara, Baljinder Kaur, Varinder Kaur, Ashwani Kumar Sood, **Parambir Singh Malhi**, Gopala Ram Bhadu, Ishita Pushkarna, Mandeep Singh. *Characterization of M-type barium hexaferrite synthesized using potatoes as natural fuel.* **Materials Today: Proceedings** (2020) DOI: 10.1016/j.matpr.2019.12.056
9. Jaswinder Pal, Sunil Kumar, Shubhpreet Kaur, Parambir Singh Malhi, Yogesh Kumar, Mandeep Singh, Anupinder Singh. *Study of the magnetic, electrical and magneto-dielectric properties and dielectric relaxation in $0.8BiFeO_3$-$0.2Ba_{0.8}Sr_{0.2}TiO_3$ solid solution.* **Solid State Sciences**. 103 (2020) 106193.
10. **Parambir Singh Malhi**, Shubhpreetkaur, Mehak Arora, Sunil Kumar, Jaswinder Pal, P Aggarwal, Mandeep Singh and Anupinder Singh. *Association of Processing parameters and Electrocaloric properties of Bi^{3+} modified PZT solid solution*. **AIP Conference Proceeding**. 2020, 2220, 030007.
11. Sunil Kumar; Shubhpreet Kaur; Mehak Arora; Simar Sapna; Sumedha Sharma; Jaswinder Pal; **Parambir Singh Malhi**; Paras Aggarwal; Mandeep Singh; Anupinder Singh. *Structural, microstructural and magnetic properties of B-site Ti^{4+} substituted $NdFeO_3$ solid solution*s **AIP Conference Proceeding.** 2220, 030006 (2020)
12. Sunil Kumar; Shubhpreet Kaur; Mehak Arora; Harsimran Singh; Amandeep kaur; Jaswinder Pal; **Parambir Singh Malhi**; Paras Aggarwal; Mandeep Singh; Anupinder Singh. *Impedance spectroscopy and hopping mechanism of Ti^{4+} substituted at B-site of $NdFeO_3$ solid solutions.* **AIP Conference Proceeding**. 2220, 030005 (2020)
13. Sunil Kumar; Shubhpreet Kaur; Mehak Arora; Jaswinder Pal; **Parambir Singh Malhi**; Paras Aggarwal; Mandeep Singh; Anupinder Singh. *Effect of substitution of higher concentration of Pb^{2+} ion on structural and magnetic properties of $LaMnO_3$ at A-site.* **AIP Conference Proceeding.** 2220, 030008 (2020)
14. Sachin Kumar Godara; **Parambir Singh Malhi;** Varinder Kaur; Ashwani Kumar Sood; Sukhleen Bindra Narang; Gopala Ram Bhadu; Jayesh C. Chaudhari; Ishita Pushkarna; Mandeep Singh. Effect of calcination temperature on structural, magnetic and surface

morphological properties of $BaZn_{0.6}Zr_{0.6}Fe_{10.8}O_{19}$. **AIP Conference Proceeding.** 2220, 020152 (2020)

15. Sachin Kumar Godara, Harsimranjeet Singh, **Parambir Singh Malhi**, Varinder Kaur, S.B. Narang, Ashwani Kumar Sood, Gopala Ram Bhadu, Jayesh C. Chaudhari. *Synthesis and Characterization of Zn^{2+}-Zr^{4+} Substituted Barium Hexaferrite by Sol Gel Auto Combustion Method.* **Materials Today: Proceedings** 17 [1], (2019), Pages 371-379
16. Sunil Kumar, Jaswinder Pal, Shubhpreet Kaur, **Parambir Singh Malhi,** Mandeep Singh, P.D. Babu & Anupinder Singh. *The structural and magnetic properties, non- Debye relaxation and hopping mechanism in $Pb_xNd_{1-x}FeO_3$ (where x = 0.1, 0.2 and 0.3) solid solutions.* **Journal of Asian Ceramic Societies,** 7[2], (2019), 133-140
17. Aanchal Chawla, Sunil Kumar, Anupinder Singh, **P. S. Malhi**, Sandeep Sharma & Mandeep Singh *Effect of Starting Mn Precursor on the Structural and Ferroelectric Properties of BCT Based Solid Solutions.* **Integrated Ferroelectrics**, 23 [1], (2019) 74-80
18. Aanchal Chawla, Anupinder Singh, Mandeep Singh and **P.S Malhi**. *Small polaron hopping-assisted electrical conduction and relaxation in BCT and Mn-doped BCT samples*. **Journal of Asian Ceramic Societies,** 7[4], (2019), 558-568
19. **Parambir Singh Malhi** and Anupinder Singh. *Effect of the immobilized amidase on the surface morphology and dyeing properties of silk and wool.* **International conference on Redefining Textiles—Cutting Edge Technology of the Future (RTCET 2016), NIT Jalandhar, India,** April 2016
20. **Parambir Singh Malhi**; Aditi Saini; Manmeet Kaur; Rohit Mittal. Psyllium as a thickening agent in printing of cotton with reactive dyes. Colourage 3, (2015), 33-36
21. **Parambir Singh Malhi**, "Simultaneous process of cotton biopolishing and dyeing with reactive dye", Colourage, February 2014, 29-32.
22. **Parambir Singh Malhi**, Preet Kamal, Megha Thakur, *Replacement of Toxic Sodium Hydrosulphite with Fe(II) Complexes for Dyeing of Cotton with Sulphur Dyes an Environmentally Friendlier Alternative.* **Proceedings of Futuristic and Emerging Area in Technology: Issue and Challenges 2013,** 14-15 Feb, 2013, 27-30.

23. **Parambir Singh Malhi,** RB Chavan. *Replacement of conventional sodium dithionite with Fe (II) complexes for dyeing of cotton with vat dyes*. **Punjab Science Congress**, Feb 2012.

24. Kamaljit Singh, **Parambir Singh Malhi,** Sucharita Arora, Amanpreet Kaur, Chiragdeep Gupta and Prashant Munjal. *Effect of hardness on the color characteristics and performance of reactive dyes.* **Punjab Science Congress.** Feb 2012.

25. Manjeet Jassal, R. B. Chavan, Rahul Yadav and **Parambir Singh**. *Chitosan as thickener for Printing of cotton with pigment colours.* **National conference on Chitin and Chitosan**, May 24, 2005, Motilal Nehru National Institute of Technology, Allahabad.

Award/Prize/Certificate:

- GATE (2004) qualified, a fiercely competitive examination conducted by Ministry of Human Resource Development, Govt. of India

Industry Experience:

5 years of industrial exposure of continuous & exhaust processing in the area of production handling, new process & product developments, Quality & Assurance and Customer Care in the reputed textile industries like Vardhman & Nahar.

Signature

Dr. Parambir Singh Malhi