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EDUCATIONAL QUALIFICATIONS: M.Sc, M.Phil, Ph.D.

Sr.No.	Degree	Subject	College/University	Year of Passing
1	B.Sc	Physics, Chemistry, Maths, English	St.Bede's college, Shimla	2008
2	B.Ed	Physical Sciences	HP College of Education, Totu	2009
3	M.Sc.	Physics	Himachal Pradesh University Shimla	2011
4	M.Phil.	Physics	Himachal Pradesh University Shimla	2012
5	Ph.D.	Physics	Himachal Pradesh University Shimla	2018

ACHIEVEMENTS:

- Awarded Gold medal in M.Phil. Physics for 1st position in HP by HPU.
- Awarded JRF by Inter University Accelerator Centre New Delhi, from May 2012-May 2015.
- Awarded JRF by UGC DAE Consortium for Scientific Research, Indore, October 2015-October 2016.
- Awarded ITS travel award by DST.

➢ TEACHING EXPERIENCE

Worked as Assistant Professor, Department of Physics, AP Goyal Shimla University, Shimla (HP) from April 22nd 2019 -28th July 2020.

➢ PUBLICATIONS

(I) PAPERS

1. Investigation of the room temperature ferro-magnetism in transition metal-doped ZnO thin films. Arun Kumar, Pooja Dhiman, Sarveena, Sanjeev Aggarwal, Mahavir Singh, **Applied Physics A**, 126 **2020** 941.
2. The exchange bias in $NiFe_2O_4$-CoO nanocomposite prepared by polyol process. **Sarveena**, M. Singh and S. K. Sharma, **AIP Conference Proceedings**, 1832, **2017,** 050141.
3. Synthesis, phase composition, Mössbauer and magnetic characterization of iron oxide nanoparticles. **Sarveena** , J. M. Vargas , D. K. Shukla , C. T. Meneses , P. Mendoza Zélis , M. Singh and S. K. Sharma, **Physical Chemistry Chemical Physics (PCCP)**,18, **2016,** 9561-9568.
4. Surface and interface interplay on the oxidizing temperature of iron oxide and Au–iron oxide core–shell nanoparticles. **Sarveena**, Diego Muraca, P. Mendoza Zèlis, Y. Javed, N. Ahmad, J. M. Vargas, O. Moscoso-Londõno, M. Knobel, M. Singh and S. K. Sharma, **RSC Advances**, 6, **2016,** 70394-70404.
5. Investigation of structural, magnetic and Mössbauer properties of Co^{2+} and Cu^{2+} substituted Ni–Zn nanoferrites. **Sarveena**, Gagan Kumar, Arun Kumar, R. K. Kotnala, Khalid M. Batoo and M Singh, **Ceramics International**, 42, **2016,** 4993-5000.
6. Exchange bias field in mixed arrangement of NiO-Ni nanoparticles. **Sarveena**, Shalendra Kumar, M. Singh and S. K. Sharma, **AIP Conference Proceedings**, 1731, **2016,**050115.
7. Superparamagnetic behaviour and evidence of weakening in super-exchange interactions with the substitution of Gd^{3+} ions in the Mg–Mn nanoferrite matrix. Gagan Kumar, Jyoti Shah, R.K. Kotnala, Virender Pratap Singh, **Sarveena**, Godawari Garg, Sagar E. Shirsath, Khalid M. Batoo and M. Singh, **Materials Research Bulletin,** 63, **2015,**216–225.

8. Room temperature long range ferromagnetic ordering in $Ni_{0.58}Zn_{0.42}Co_{0.10}Cu_{0.10}Fe_{1.8}O_4$ nano magnetic system. **Sarveena**, R. K. Kotnala, K. M. Batoo, Jagdish Chand, S. Verma and M. Singh, **AIP Conference Proceedings**, 1665, **2015,** 050114.
9. Study of Mössbauer and magnetic properties of Al^{3+} ions doped superparamagnetic nano ferrites. Satish Verma, Jagdish Chand, **Sarveena** and M. Singh, **AIP Conference Proceedings**, 1665, **2015**, 130008.
10. The microstuctural, Mössbauer and magnetic properties of $MgGd_{0\cdot1}Fe_{1\cdot9}O_4$ ferrite processed by solid state reaction technique. Jagdish Chand, Satish Verma, Pooja, **Sarveena** and M. Singh, **AIP Conference Proceedings**, 1591, **2014**, 1518.
11. Ni, Fe Co-doped ZnO nanoparticles synthesized by solution combustion method. Pooja Dhiman, Jagdish Chand, S. Verma, **Sarveena** and M. Singh, **AIP Conference Proceedings**, 1591,**2014**, 1443.
12. Structural, dielectric and Mössbauer properties of $Mg_{0.2}Mn_{0.5}Ni_{0.3}Al_yFe_{2-y}O_4$ nanoferrites prepared by citrate precursor method. Satish Verma, Jagdish Chand, Pooja Dhiman**, Sarveena** and M. Singh, International Journal of Engineering Research and Technology (**IJERT**), AMRP-2013 Conference Proceedings, 97-98.
13. The electric and dielectric properties of Gd^{3+} doped Mg ferritep by solid state reaction technique, Jagdish Chand, Satish Verma, Pooja Dhiman, **Sarveena** and M. Singh, International Journal of Engineering Research and Technology (**IJERT**), AMRP-2013 Conference Proceedings, 40-41.

(II) BOOK CHAPTERS

1. **Chapter 5:** The Role of Nanoferrites in Bio-medical Applications. **Sarveena (2021)**, In: G.K. Bhargava, S. Bhardwaj, M. Singh, K. M. Batoo, (eds) Ferrites and Multiferroics. Engineering Materials. Springer, Singapore.
2. **Chapter 3:** Wet Chemical Synthesis and Processing of Nanoferrites in Terms of Their Shape, Size and Physiochemical Properties. **Sarveena**,

G. Kumar,N. Kondal, M. Singh, , S.K. Sharma, **(2021).** In: S.K. Sharma (eds) Spinel Nanoferrites. Topics in Mining, Metallurgy and Materials Engineering. Springer, Cham.

3. **Chapter 9:** Design of Magnetic-Luminescent Nanoplatforms: Applications in Theranostics and Drug Delivery. Navadeep Shrivastava, **Sarveena**, Naveed A. Shad, Muhammad Munir Sajid, Adam Duong and S. K. Sharma, (**2020)**, In: S. K. Sharma and Y. Javed (eds.), Magnetic Nanoheterostructures, Nanomedicine and Nanotoxicology, Springer, cham.
4. **Chapter 10:** Evaluation of Hyperthermic Properties of Magnetic Nano-Heterostructures Based on Gold-Iron Oxide and Noble Metal-Ferrite Systems. **Sarveena**, Navadeep Shrivastava, Naveed A. Shad, Muhammad Munir Sajid, M. Singh, Yasir Javed and S. K. Sharma, **(2020)**, In: S. K. Sharma and Y. Javed (eds.), Magnetic Nanoheterostructures, Nanomedicine and Nanotoxicology, Springer, cham.
5. **Chapter 7**: Multifunctional Magnetic Nanostructures: Exchange Bias Model and Applications. **Sarveena**, Navadeep Shrivastava, M. Singh and Surender Kumar Sharma, **(2017),** In: S.K. Sharma (ed.), Complex Magnetic Nanostructures**, Springer**, cham.
6. **Chapter 1**: The Basis of Nanomagnetism: An Overview of Exchange Bias and Spring Magnets. Navadeep Shrivastava, **Sarveena**, M. Singh and S. K. Sharma, **(2017),** In: S.K. Sharma (ed.), Exchange Bias: From Thin Film to Nanogranular and Bulk Systems, **CRC Press**.

➢ PAPER PRESENTED IN WORKSHOP/CONFERENCE

1. Effect of oxidation temperature on iron oxide core-shell nanoparticles and their application in magnetic hyperthermia, **Sarveena**, M. Singh, and S. K. Sharma, presented in National Conference on Advances in Science & Technology: A Step Towards Make in Indian in Defence Sector **(NCAST 2017)** held at Indian Military Academy, Dehradun (Uttarakhand) from 24-25 March **2017.**

2. The exchange bias in $NiFe_2O_4$-CoO nanocomposite prepared by polyol process, **Sarveena**, M. Singh, and S. K. Sharma, presented in 61st DAE Solid State Physics Symposium **(DAE-SSPS 2016)** held in KIIT University, Bhubaneswar, odisha from 26 -30 December **2016.**
3. Size and shape tunable iron oxide with core-shell nanoparticles for magnetic hyperthermia applications, **Sarveena**, Shalendra Kumar, M. Singh, D. K. Shukla, S. K. Sharma, presented in 13th Joint **MMM-Intermag** Conference held at Hilton, San Diego Bayfront, USA from 11 - 15 January **2016.**
4. Room temperature long rang ferromagnetic ordering in $Ni_{0.58}Zn_{0.42}Co_{0.10}Cu_{0.10}Fe_{1.8}O_4$ nano magnetic system, **Sarveena**, R. K. Kotnala, K. M. Batoo, Jagdish Chand, S. Verma and M. Singh, presented in 59th DAE Solid State Physics Symposium **(DAE-SSPS-2014)** held at VIT University, Vellore, Tamilnadu from 16-20 December **2014.**
5. Structural and magnetic properties of sol-gel autocombustion synthesized $Ni_{0.58}Zn_{0.42}Co_{0.10}Cu_{0.10}Fe_{1.8}O_4$ nanoferrites, **Sarveena**, Pooja Dhiman, K. M. Batoo, Jagdish Chand, Satish Verma, Arun Kumar and M.Singh presented in International Conference on Electron Microscopy And XXXV Annual Meeting of the Electron Microscope Society of India & Pre-Conference Workshops on Electron Microscopy **(EMSI-2014)** held at University of Delhi, New Delhi, from 07-11 July **2014.**
6. Enhanced magnetic behaviour of Co and Cu substituted NiZn nanoferrites, **Sarveena**, Pooja Dhiman, K.M. Batoo and M. Singh presented in Two days National Workshop on Ion Beam Induced Growth and Engineering of Materials, Department of Physics, Kurukshetra University, Kurukshetra from 11-12 March **2014.**

➢ CONFERENCES/ SEMINARS/FDP

1. One-week faculty development program on essentials for blended learning organized by the department of information, Dr. M.G.R. Educational and research institute, Chennai, 13-20 July **2020**.
2. International webinar on Nanotechnology-The way ahead by Department of Physics, Guru Nanak Khalsa College, 30 September **2020**.

3. International symposium on Nanoscience & Nanotechnology, Amity Centre of Nanotechnology, Amity University, Gurugram, 7-9 June **2020**.
4. A workshop in frontiers in physics AWFP-2017, Himachal Pradesh University, Shimla, India, 17-18 March **2017**.
5. CSR lecture series – module 2 at UGC-DAE Consortium for Scientific Research, Indore, Madhya Pradesh, India, from 15-26 September **2014**.
6. Two days national workshop on ion beam induced growth and engineering of materials, Department of Physics, Kurukshetra University, India, From March 11-12, 2014.
7. Two days national workshop on antenna materials at Jaypee University of Information Technology (JUIT), Wakanaghat, Solan, India, 14-15 December, **2012**.
8. National seminar on advances in environmental science (NSAES-2012) by Him Science Congress Association, Shoolini University, Solan, Himachal Pradesh on 24th August **2012**.
9. Physics learning camp for undergraduates at Punjab University, Chandigarh, India from 2-7 August **2007**.