Dr. Kamlesh Yadav
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Education

Degree/ Exam	University/ Board	Year	% Marks/Rank	Subjects
Ph.D.	I.I.T. Roorkee, Roorkee Mentor: Dr. G. D. Varma	2012	-	Experimental Condensed Matter Physics
M.Sc.	Kurukshetra University, Kurukshetra	2007	**78.70, 2nd in University**	Physics
B.Sc.	Kurukshetra University, Kurukshetra/G.M.N. College, Ambala Cantt	2005	**80.41, 1st in College**	Physics, Chemistry Mathematics

Title of the Ph.D. Thesis:

STUDY OF A, B-SITE DOPED CHARGE ORDERED $Bi_{1-x}Ca_xMnO_3$ AND $(Nd/La)_{0.5}Sr_{0.5}MnO_3$ PEROVSKITES

National Level Test: Qualified Graduate Aptitude Test in Engineering **(**GATE)-2008.

Experience:

S.No.	Position and Organisation	Nature of Job	Period
1.	Junior Research Scholar, I.I.T. Roorkee, Roorkee	Research	1 July 2008-31 June 2010
2.	Senior Research Scholar, I.I.T. Roorkee, Roorkee	Research	1 July 2010-30 September 2012
3.	Assistant Professor, Graphic Era University, Dehradun	Teaching	1 October 2012- 30 April 2013 (7 Month)
4.	Assistant Professor, Central University of Punjab, Bathinda	Teaching and Research	7 May 2013- till date

Teaching Assignments:

1. Classical Mechanics
2. Quantum Mechanics
3. Quantum measurements
4. Solid State Physics
5. Introduction to Particle Physics
6. Thin Film Fabrication and Vacuum Techniques

7. Experimental techniques
8. Introduction to Nanophysics
9. Modern Functional Materials
10. Thin Films and Nanoscience
11. Modern Physics Laboratory
12. Solid State Physics Laboratory
13. Thin Films and Nanomaterials Laboratory

New course developed:

1. Classical Mechanics (M.Sc) and Advanced Classical Mechanics (M.Phil.)
2. Quantum Mechanics-I and II (M.Sc) and Advanced Quantum Mechanics (M.Phil.)
3. Solid State Physics (M.Sc) and Advanced Solid State Physics (M.Sc., and Ph.D.)
4. Thin Films and Nanoscience (M.Sc.)
5. Modern Functional Materials (M.Sc.)
6. Modern Physics Laboratory and Solid State Physics Laboratory (M.Sc)
7. Thin Films Laboratory (M.Phil.)
8. Nanomaterials Laboratory (M.Sc.)

Research Project

Completed

1. UGC Newly Recruited Faculty Start-Up-Grant, "*Synthesis and Study of Structural, Magnetic, Dielectric and Transport Properties of Doped Nanodimensional* $BiMnO_3$ *Perovskite Manganites"*, Two years (2015-2017), 6.0 Lakh, University Grant Commission.
2. Received RSM grant on the topic: **"***Thin Film Deposition of Magnetic Oxides using Spray Pyrolysis Technique and their Characterization" by* CUP-Bathinda for Two Years (2014-2016), 3.0 Lakhs.

Area specializations/Research Interest

We are working on synthesis and characterization of thin film and nanomaterials. Thin films are the building blocks of a wide variety of nanomaterials and devices. Our aim is to deposit thin films and nanocomposite coatings based on organic (polymers or small molecules), metallic and oxide materials by Spray pyrolysis and other techniques. We are developing the deposition processes for thin films, the characterization of thin films and applications of thin films. We are also working on synthesizing nano-structures with outstanding physical, chemical, electrical, optical and magnetic properties.

SKILLS:

(i) Synthesis and Characterization of Nanomaterials and Thin films of Oxide and Polymer Nanocomposites.

(ii) Materials Analysis:

Structural analysis: XRD analysis.
Surface property analysis: FESEM, EDX and TEM analysis.
Magnetic properties analysis: VSM and SQUID analysis.
Optical properties: UV visible and FTIR analysis.

Electrical properties analysis: Variation of Resistivity with temperature measurement by using four probe methods with or without magnetic fields.
Thermal Properties: TGA, DSC
Dielectric Properties: Impedance measurements, P-E loop study.

M.Sc. and M.Phil. Dissertation Supervised

Topic of Dissertation	Name of Student	Program	Year
Completed			
Thin Film Deposition of α-Fe_2O_3 and its Characterization	Ajay Kumar	M.Phil.	2013-2014
Synthesis and Characterization of $BiMnO_3$ Nanoparticles	Neha Bhardwaj	M.Phil.	2013-2014
Synthesis and Characterization of Doped Perovskite Manganites Nanoparticles	Reena Rani	M.Phil.	2013-2014
Synthesis and Characterization of Doped Chromium Oxide Nanoparticles	Gaurav Kumar Yogesh	M.Sc.	2013-2014
Synthesis and Characterization of Doped ZnO Thin Films	Sansar Chand	M.Sc.	2013-2014
Synthesis and Characterization of ZnO Nanoparticles	Shivam Shukla	M.Sc.	2013-2014
Study of Polymer Nanocomposite Thin Films Deposited by Spray Pyrolysis Technique on Glass	Anjana Thakur	M.Phil.	2014-2015
Study of Multiferroics Nanoparticles	Devender Jalandhara	M.Phil.	2014-2015
Synthesis and Characterization Iron Oxide Nanoparticles	Gurdhir Singh	M.Phil.	2014-2015
Synthesis and Characterization of Nanocomposites	Priya Thakur	M.Phil.	2014-2015
Study of Doped $LaMnO_3$ Nanopartilces	Nitika	M.Sc.	2015-2016
Synthesis and Characterization of $BiFe_{1-x}Ag_xO_3$ Nanoparticles	Jawar Singh	M.Sc.	2015-2016

M.Sc. Project Supervised
Total: 4

M.Sc. Project Ongoing
Total: 3

Ph.D. Supervision Ongoing
Anu Sharma: Working on Multiferroics.

Orientation/Refresher Course Attended

Attended 96th Orientation program from 12th January 2015 to 7th February 2015 at University of Rajasthan, Jaipur.

Attended 56th Refresher Course from 20th June 2016-9th July 2016 at HRDC, Punjabi University, Patiala, Punjab.

Awards and recognitions

- Received Best Teacher Award on 8th Foundation Day Celebrations of Central University of Punjab, Bathinda-151001, 28th February 2017.

Extension Lecture/Seminar Delivered

- Chaired a technical Session in a conference on *Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16) Conference,* held at Mata Sahib Kaur Girls College, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.
- Delivered an extension lecture on the topic "*Synthesis, Properties and Applications of Nanomaterials*" at Guru Nanak Dev College for Girls, Muktsar, Bathinda on 24 September 2015.
- Presented a lecture on the topic "*Nanotechnology: The technology of the Future*" at RBDAV School, Bathinda under the Rashtriya Avishkar Abhiyaan on 19 December 2014.
- Presented a model entitled "*Cell Phone Controlled Agricultural Water Pump*" in first Innovators Day at Central University of Punjab on 17th January, 2014.
- Delivered Faculty seminar on the topic "*Magnetic Properties of Manganites*", Central University of Punjab, Bathinda-151001.

Publications

Research Papers

1. Kamlesh Yadav, M. P. Singh, H. K. Singh, F.S. Razavi and G. D. Varma, "Magnetic and charge ordering properties of $Bi_{0.6-x}(RE)_xCa_{0.4}MnO_3$ ($0.0 \leq x \leq 0.6$) perovskite manganites", *J. Appl.Phys 111 07E128 (2012)* **(I.F. 2.068).**

2. Kamlesh Yadav, V. Vaithyanathan, S.S.R. Inbanathan and G. D. Varma, "Magnetic and charge ordering properties of $Bi_{0.2}Ca_{0.8}Mn_{0.9}X_{0.1}O_3$ (where X=Ti, Cr, Fe, Co, Ni, Cu)", *J. Alloys Compd 533 19 (2012)* **(I.F. 3.133).**

3. Kamlesh Yadav, M. P. Singh, F.S. Razavi and G. D. Varma, "Effect of Cu doping and oxygen-annealing on the magnetic properties of $Nd_{0.5}Sr_{0.5}Mn_{1-x}Cu_xO_3$ (x = 0.0, 0.01, 0.03, 0.05 and 0.10)", *Mater. Chem.Phys.* 137 (2012) 323 **(I.F. 2.084).**

4. Kamlesh Yadav, M. P. Singh, H. K. Singh, F.S. Razavi and G. D. Varma, "Effect of Nd doping on the magnetic properties of charge ordered $Bi_{0.6-x}Nd_xCa_{0.4}MnO_3$ ($0.0 \leq x \leq 0.6$) perovskite manganites", *Applied Physics A,* 111 (2013) 845 **(I.F. 1.455).**

5. Kamlesh Yadav, M. P. Singh, F.S. Razavi and G. D. Varma, "Magnetic and charge ordering properties of $Bi_{0.6-x}Eu_xCa_{0.4}MnO_3$ ($0.0 \leq x \leq 0.6$)", *J. Magn. Magn. Mater* 324 (2012) 4048 **(I.F. 2.630).**

6. **Kamlesh Yadav**, M. P. Singh, F.S. Razavi and G. D. Varma, "Effect of A-site cation size on magnetic and charge-ordering properties of $Ln_{0.5}Sr_{0.5}Mn_{0.90}Cu_{0.10}O_3$ (Ln= La, Pr, Nd or Ho)", *Mater. Sci. Eng. B* 177 (2012) 1219 **(I.F. 2.552).**

***7.* Kamlesh Yadav**, H K Singh and G D Varma, "Effect of La-doping on magnetic properties of $Bi_{0.6-x}La_xCa_{0.4}MnO_3$ ($0.0 \leq x \leq 60.6$) perovskite manganites", *Phys. Scr. 85 (2012) 045704* **(I.F. 1.280).**

8. Kamlesh Yadav, H. K. Singh and G. D. Varma, "Interplay between charge and antiferromagnetic ordering in $Bi_{0.6x}Pr_xCa_{0.4}MnO_3$ ($0 \leq x \leq 0.6$) perovskite manganite", *Physica B 407 (2012) 1244* **(I.F. 1.386).**

9. Kamlesh Yadav and G. D. Varma, "Magnetic and Charge Ordering Properties of $Bi_{0.2-x}Pr_xCa_{0.8}MnO_3$ ($0.0 \leq x \leq 0.20$) Perovskite Manganite", *J. Supercond. Nov. Magn.* 25 (2012) 1097 **(I.F. 1.180).**

10. Umesh Chand, **Kamlesh Yadav**, Anurag Gaur and G D Varma, "Effect of different synthesis techniques on structural, magnetic and magneto-transport properties of $Pr_{0.7}Sr_{0.3}MnO_3$ manganite", *Journal of Rare Earths* 28 (2010) 760 **(I.F. 2.429).**

11. A. Gaur, U. Kr. Gaur, **Kamlesh Yadav** and G. D. Varma, "Study of structural, magnetic and magneto-transport properties of nanocrystalline $La_{2/3}Ca_{1/3}MnO_3$ manganite", *Optoelectronics and Advanced Materials – Rapid Communications* 4 (2010) 989 **(I.F. 0.412).**

12. U. Chand, **Kamlesh Yadav**, A. Gaur and G. D. Varma, "Structural, magnetic and magnetotransport properties of $Pr_{1-x}Sr_xMnO_3$ (x=0.2, 0.3 &0.5) synthesized by co-precipitation method", O*ptoelectronics and Advanced Materials – Rapid Communications* 4 (2010) 1747 **(I.F. 0.412).**

13. Umesh Chand, **Kamlesh Yadav**, Anurag Gaur and G. D. Varma, "Magnetic and Magnetotransport Properties of $(Pr_{0.7}Sr_{0.3}MnO_3)_{1-x}/NiO_x$ Composites", *AIP Conf. Proc.* 1349 (2011) 1263.

14. Kamlesh Yadav, M. P. Singh, H. K. Singh, F.S. Razavi and G. D. Varma, "Study Of Structural, Magnetic And Electric Properties Of $Bi_{0.6-x}Nd_xCa_{0.4}MnO_3$ ($0.0 \leq x \leq 0.6$) Perovskite Manganites", *AIP Conf. Proc.* 1447 (2012) 1131.

15. Neha Bhardwaj, Anurag Gaur, and **Kamlesh Yadav**, "Optical and dielectric properties of $BiMn_{1-x}AE_xO_3$ (AE=Cr, Fe, Co, and Zn; x=0, 0.1) nanoparticles synthesized by sol-gel technique", *AIP Conf. Proc.* 1675 (2015) 030070.

16. Reena Rani and **Kamlesh Yadav**, "Study of optical properties of $BaMn_{1-x}Cr_xO_3$ (x=0.0, 0.1, 0.2, 0.3, 0.4, 0.5) manganites using microwave synthesis method", *AIP Conf. Proc.* 1675 (2015) 030068.

17. Anjna Thakur, Priya Thakur and **Kamlesh Yadav,** "Thickness dependent optical properties of PEMA and $(PEMA)_{0.85}/(ZnO)_{0.15}$ nanocomposite films deposited by spray pyrolysis technique on ITO substrate",

AIP Conf. Proc. 1728 (2016) 020412.

18. Priya Thakur, Anjna Thakur, and **Kamlesh Yadav,** "Study of variation in the band gap with concentration of TiO_2 In $(LaMnO_3)_{1-x}$ / $(TiO_2)_x$ (where x = 0.0,0.1,0.2,0.3 and 0.4) nanocomposites", *AIP Conf. Proc. 1728 (2016) 020414.*

19. Devender Jalandhara, Gurdhir Singh and **Kamlesh Yadav**, "Effect of sintering temperature on the optical properties of $BiFeO_3$ nanoparticles", *AIP Conf. Proc. 1728, 020437 (2016).*

20. Gurdhir Singh, Devender Jalandhara, and **Kamlesh Yadav**, "Effect Of Grain Size On Optical Properties Of Iron Oxide Nanoparticles", *AIP Conf. Proc. 1728, 020409 (2016).*

21. Anjna Thakur, Priya Thakur, and **Kamlesh Yadav**, "Morphological, Optical and Thermal Properties of $(TiO_2)_x$ Embedded $(PVC/PE)_{1-x}$ (Where x = 0.0, 0.1, 0.2, 0.3, 0.4 and 0.5) Blend Nanocomposites", Recent Trends in Materials and Devices, Proceedings ICRTMD 2015, Springer Proceedings in Physics, 178, 89-100 (2016).

22. Priya Thakur, Anjna Thakur, and **Kamlesh Yadav**, "Optical Properties of $(Fe_2O_3)_{1-x}/(Cr_2O_3)_x$ (Where x = 0.0, 0.1, 0.2, 0.3, 0.4 and 0.5) Nanocomposites", Recent Trends in Materials and Devices, Proceedings ICRTMD 2015, *Springer Proceedings in Physics, 178, 145-155 (2016).*

23. Neha Bhardwaj, Anurag Gaur and **Kamlesh Yadav**, "Effect of doping on optical properties in $BiMn_{1-x}(TE)_xO_3$ (where x = 0.0, 0.1 and TE = Cr, Fe, Co, Zn) nanoparticles synthesized by microwave and sol-gel methods", *Applied Physics A* 123, 429 (2017) **(I.F. 1.455).**

24. Kamlesh Yadav, M. P. Singh, F.S. Razavi and G. D. Varma, "Effect of Ti^{4+} Doping on Magnetic Properties of Charge Ordered $Bi_{0.3}Ca_{0.7}MnO_3$", *Mater. Res. Express 4 (2017) 076102* **(I.F. 1.068).**

25. Ajay Kumar **and Kamlesh Yadav,** "Optical Properties of Nanocrystallites Films of α-Fe_2O_3 and α-$Fe_{2-x}Cr_xO_3$ ($0.0 \leq x \leq 0.9$) Deposited on Glass Substrates", *Mater. Res. Express 4 (2017) 075003* **(I.F. 1.068).**

26. Kamlesh Yadav, H. K. Singh, K. K. Maurya, G. D. Varma, "Thickness-dependent magnetic and transport properties of $La_{0.5}Sr_{0.5}MnO_3$ thin films deposited by DC magnetron sputtering on the $LaAlO_3$ substrate", *Applied Physics A* 124, 66 (2018) **(I.F. 1.455).**

27. Rohit Sharma and **Kamlesh Yadav,** "Effect of Lattice Defects on the Structural and Optical Properties of $Ni_{1-X}Ag_XO$ (where X=0.0, 0.01, 0.03, 0.05, 0.10 and 0.15) Nanoparticles", *Applied Physics A* 124, 88 (2018) **(I.F. 1.455).**

View My Publications at:
Google Scholar: https://scholar.google.co.in/citations?user=jyUPvUgAAAAJ&hl=en&oi=ao
Research Gate: https://www.researchgate.net/profile/Kamlesh_Yadav

Workshop/Conferences

Workshop Attended

1. Participated in a workshop on "*Capacity Building of Higher Education Teachers on e-Content Development Using Moodle*" from 15th to 16th of September, 2015 at Central University of Punjab, Bathinda-151001.

2. Participated in *One day Acquaintance program of IUAC, New Delhi*, held at Central University of Punjab, Bathinda-151001 on 4th April, 2016.

Paper Presented in Conferences

1. Yadav K, and Varma G D, "*Structural, magnetic and charge ordering properties of* $Bi_{0.6-x}Pr_xCa_{0.4}MnO_3$ *(0.0≤x≤0.6) perovskite manganites*", International Conference on Quantum Effects in Solids of Today, National Physical Laboratory, New Delhi, India, 20-23 December 2010.

2. Yadav K, Singh M P, Singh H K, Razavi F S and Varma G D, "*Magnetic and charge ordering properties of* $Bi_{0.6-x}(RE)_xCa_{0.4}MnO_3$ *(0.0≤x≤0.6) perovskite manganites*", 56th Magnetism and Magnetic Materials Conference, Scottsdale, Arizona, USA, 30 October-3 November 2011.

3. Yadav K, Singh M P, Singh H K, Razavi F S and Varma G D, "*Study Of Structural, Magnetic And Electric Properties Of* $Bi_{0.6-x}Nd_xCa_{0.4}MnO_3$ *(0.0≤x≤0.6) Perovskite Manganites*", 56^{Th} DAE Solid State Physics Symposium, SRM university, Tamilnadu, India, 19-23 December 2011.

4. Yadav K, Singh M P, Razavi F S and Varma G D, "*Charge-Ordering, Magnetic and Electric-Transport Properties of* $Bi_{0.6-x}Eu_xCa_{0.4}MnO_3$ *(0.0≤x≤0.6)*", National Conference on Advances in Physics, Indian Institutes of Technology Roorkee, India, 25-26 February 2012.

5. Yadav K, Vaithyanathan V, Inbanathan S S R and Varma G D, "*Effect of Doping on Charge Ordering Properties of* $Bi_{0.2}Ca_{0.8}Mn_{0.9}X_{0.1}O_3$ *(X=Ti, Cr, Fe, Co, Ni, Cu)*", National Conference on Materials for Advanced Technologies, ABV−IIITM, Gwalior (M. P.), India, 26-28 February 2012.

6. Chand U, Yadav K, Gaur A, and Varma G. D., "*Magnetic and Magnetotransport Properties of* $(Pr_{0.7}Sr_{0.3}MnO_3)_{1-x}/NiO_x$ *Composites*", In the proceeding of " 55^{Th} DAE solid state physics symposium", Manipal University, Manipal, India, 2010.

7. Ajay Kumar, Kamlesh Yadav, "*Optical Properties of* α-Fe_2O_3 *and* α-$Fe_{2-x}Cr_xO_3$ *(x=0.0, 0.1, 0.2, 0.3, 0.4, 0.7 and 0.9) Nanocrystallite Thin Films Deposited by Spray Pyrolysis Technique on Glass Substrate*", 4th International Conference on Current Developments in Atomic, Molecular, Optical and Nano Physics with Applications, CDAMOP 2015, University of Delhi, New Delhi-110001, March 11-14, 2015.

8. Neha Bhardwaj**,** Kamlesh Yadav, **"***Synthesis and characterization of* $BiMnO_3$ *and* $Bi(Mn,AE)O_3$*(AE = Cr, Fe, Co, and Zn) nanoparticles assisted by microwave organic synthesis and sol-gel technique",* National Conference on Condensed Matter Physics and Applications-CMPA-2015, Manipal University, Manipal-576104; March 27-28, 2015, **Best Research Paper Award in Oral presentation.**

9. Reena Rani, Kamlesh Yadav, "*Study of the* $BaMnO_3$ *and Cr doped* $BaMnO_3$ *Perovskite*", National Conference on Condensed Matter Physics and Applications-CMPA-2015, Manipal University, Manipal-576104; March 27-28, 2015, **Best Research Paper Award in Poster presentation.**

10. Ajay Kumar, Kamlesh Yadav, "*Optical Properties of* α-Fe_2O_3 *and* α-$Fe_{2-x}Cr_xO_3$ *(x=0.0, 0.1, 0.2, 0.3, 0.4, 0.7 and 0.9) Films Prepared by Spray Pyrolysis*", National Conference on Condensed Matter Physics and Applications-CMPA-2015, Manipal University, Manipal-576104; March 27-28, 2015.

11. Neha Bhardwaj, Kamlesh Yadav, "*Optical and Dielectric Properties of* $BiMn_{1-x}AE_xO_3$ *(AE= Cr, Fe, Co, and Zn; x=0, 0.1) Nanoparticles Synthesized by Sol-Gel Technique*", 4th National Conference on Advanced Materials and Radiation Physics -AMRP-2015, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur-148106 (Punjab), March 13-14, 2015.

12. Reena Rani, Kamlesh Yadav, "*Study of Optical Properties of* $BaMn_{1-x}Cr_xO_3$ *(x=0.0, 0.1, 0.2, 0.3, 0.4, 0.5) Manganites using Microwave Synthesis Method*", 4th National Conference on Advanced Materials and Radiation Physics -AMRP-2015, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur-148106 (Punjab), March 13-14, 2015.

13. Shivam Shukla, Kamlesh Yadav, "*Effect of* Ti^{3+} *Doping on Optical Properties in* $Zn_{1-x}Ti_xO$ *(where x = 0.0, 0.1, 0.3 and 0.5) Nanoparticles",* 3^{rd} National Conference on Nanoscience and Instrumentation Technology-NCNIT-2015, National Institute of Technology Kurukshetra-136119, Haryana, June 06-07, 2015.

14. Devender Jalandhara, Kamlesh Yadav, "*Optical Properties of $BiFeO_3$ Nanoparticles*", 3rd National Conference on Nanoscience and Instrumentation Technology-NCNIT-2015, National Institute of Technology Kurukshetra-136119, Haryana, June 06-07, 2015.

15. Gurdhir Singh, Kamlesh Yadav, "*Study of Optical Properties of Iron Oxide Nanoparticle*", 3rd National Conference on Nanoscience and Instrumentation Technology-NCNIT-2015, National Institute of Technology Kurukshetra-136119, Haryana, June 06-07, 2015.

16. Anjna Thakur, Priya Thakur and Kamlesh Yadav, "*Thickness Dependent Optical Properties Of PEMA And $(PEMA)_{0.85}/(ZnO)_{0.15}$ Nanocomposite Films Deposited By Spray Pyrolysis Technique On ITO Substrate*" in International Conference on Condensed Matter & Applied Physics (ICC-2015) at Department of Physics, Govt. Engineering College, Bikaner, October 30-31, 2015.

17. Priya Thakur, Anjna Thakur and Kamlesh Yadav, "*Study Of Variation In Band Gap With Concentration Of TiO_2 In $(LaMnO3)_{1-x}/(TiO_2)_x$ (where x = 0.0, 0.1, 0.2, 0.3 and 0.4) Nanocomposites*" in International Conference on Condensed Matter & Applied Physics (ICC-2015) at Department of Physics, Govt. Engineering College, Bikaner, October 30-31, 2015.

18. Gurdhir Singh, Devender Jalandhara and Kamlesh Yadav,"*Effect Of Grain Size On the Optical Properties Of Iron Oxide Nanoparticles*" in International Conference on Condensed Matter & Applied Physics (ICC-2015) at Department of Physics, Govt. Engineering College, Bikaner, October 30-31, 2015.

19. Devender Jalandhara, Gurdhir Singh and Kamlesh Yadav,"*Effect Of Sintering Temperature On the Optical Properties Of $BiFeO_3$ Nanoparticles*" in International Conference on Condensed Matter & Applied Physics (ICC-2015) at Department of Physics, Govt. Engineering College, Bikaner, October 30-31, 2015.

20. Devender Jalandhara, Gurdhir Singh and Kamlesh Yadav, "*Effect of La doping on the optical properties in $BiFeO_3$ nanoparticles*" in 3rd National Conference on Photonics and Material Science (NCPMS)-2015 at Department of Applied Physics, Guru Jambheshwar University of Science and Technology, Hisar, November 18-19, 2015.

21. Gurdhir Singh, Devender Jalandhara, and Kamlesh Yadav, "*Effect of Cr, Cu and Mn doping on the structural and optical properties in iron oxide nanoparticles*" in 3rd National Conference on Photonics and Material Science (NCPMS)-2015 at Department of Applied Physics, Guru Jambheshwar University of Science and Technology, Hisar, November 18-19, 2015.

22. Anjna Thakur, Priya Thakur and Kamlesh Yadav, "*Morphological, Optical and Thermal Properties of $(Ti_2O)_x$ Embedded $(PVC/PE)_{1-x}$ (where x=0.0, 0.1, 0.2, 0.3, 0.4 and 0.5) Blend Nanocomposites*" in International Conference on Recent Trends in Materials and Devices, ICRTMD-2015 at Amity Institute for Advanced Research & Studies (Materials & Devices) & Amity Institute of Applied Sciences, Amity University, Noida, U.P., December 15-17, 2015.

23. Priya Thakur, Anjna Thakur, and Kamlesh Yadav, "*Optical Properties of $(Fe_2O_3)_{1-x}/(Cr_2O_3)_x$ (where x=0.0, 0.1, 0.2, 0.3, 0.4 and 0.5) Nanocomposites*" in International Conference on Recent Trends in Materials and Devices, ICRTMD-2015 at Amity Institute for Advanced Research & Studies (Materials & Devices) & Amity Institute of Applied Sciences, Amity University, Noida, U.P., December 15-17, 2015.

24. Anjna Thakur, Priya Thakur, and Kamlesh Yadav, "Study of Structural, Morphology and Optical Properties of PVC/$BaTiO_3$ Nanocomposite Films" in *4th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-16)* at Baba Farid College of Engineering and Technology, Bathinda (Punjab), February 25-27, 2016.

25. Priya Thakur, Anjna Thakur, and Kamlesh Yadav, "Synthesis and Optical Properties of $(Cr_2O_3)_{(1-x)}$ /$(Fe_2O_3)_x$ (where x = 0.0, 0.1, 0.2, 0.3, 0.4., 0.5 and 0.6) Nanocomposites" in *4th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-16)* at Baba Farid College of Engineering and Technology, Bathinda (Punjab), February 25-27, 2016.

26. Devender Jalandhara, Gurdhir Singh, Anjna thakur and Kamlesh Yadav, "Structural and Optical Properties of Multiferroics $BiFeO_3$ Nanoparticles Synthesized by Sol Gel Method" in *4th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-*

16) at Baba Farid College of Engineering and Technology, Bathinda (Punjab), February 25-27, 2016.

27. Gurdhir Singh, Jawar Singh and Kamlesh Yadav, "To Study the Effect of Cr, Cu, Mn, Zn and Ni Doping on the Structural and Optical Properties in Iron Oxide Nanoparticles" in *4th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-16)* at Baba Farid College of Engineering and Technology, Bathinda (Punjab), February 25-27, 2016.

28. Sansar Chand, Reena Rani, and Kamlesh Yadav, "Effect of Concentration of Ti Doping on Optical Properties of $Zn_{1-x}Ti_xO$ (where x=0.0, 0.1, 0.3, 0.5, 0.7 and 0.9) Thin Films Deposited by Spray Pyrolysis" in *4th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-16)* at Baba Farid College of Engineering and Technology, Bathinda (Punjab), February 25-27, 2016.

29. Jawar Singh, Nitika, Devender Jalandhara, Gurdhir Singh, and Kamlesh Yadav, "Optical Properties of $BiFe_{1-x}Ag_xO_3$ (x = 0.0, 0.1, 0.2, 0.3, 0.4 and 0.5) Nanoparticles" in Conference on *Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16),* at MATA SAHIB KAUR GIRLS COLLEGE, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.

30. Nitika, Jawar Singh, and Kamlesh Yadav, "Effect of Ca Doping on the Optical Properties of $La_{1-x}Ca_xMnO_3$ ($0.0 \leq x \leq 0.5$) Nanoparticles" in Conference on *Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16),* at MATA SAHIB KAUR GIRLS COLLEGE, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.

Collaboration

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