Curriculum – Vitae

Dr NEERAJ PANWAR

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ACADEMIC QUALIFICATIONS

Sr. No.	Position/Degree	University/Institute	Work detail
1	Assistant Professor (June 2013-till date)	Department of Physics, Central University of Rajasthan, INDIA	Teaching and Research
2	Post Doctoral Researcher	University of Aveiro, Portugal	Nanoscale characterization of charge ordered manganites, Multiferroics
3	Post Doctoral Researcher	University of Puerto Rico, USA	Wide bandgap semiconductors, Multiferroics
4.	Project Scientist	Indian Institute of Technology Delhi, INDIA	GMR and TMR materials
5.	Ph.D.	Indian Institute of Technology Delhi, INDIA	CMR manganites
6.	Project Assistant	National Physical Laboratory New Delhi, INDIA	Superconductivity
7.	Master of Science	Indian Institute of Technology Roorkee, INDIA	Physics
8.	Bachelor of Science	C.C.S. University, Meerut, INDIA	Physics, Chemistry, Math

AREAS OF RESEARCH INTEREST

Magnetic materials, electro- and magneto-caloric effect, multiferroic materials, lead free piezoelectrics, UV sensors, photovoltaic effect in ferroelectrics, Photocatalytic Activity

RESEARCH PROJECTS (ONGOING/COMPLETED)

1. Exploring the magnetocaloric properties of bulk ceramics, nanocrystalline and thin films of manganese doped rare-earth orthochromites (**ECR/2017/002681**); approximate cost **45** lakhs funded by Science and

Engineering Research Board Department of Science and Technology, Government of India (3 years): **Completed (October 2021)**

2. Impact of ion irradiation on the exchange bias, magnetization reversal spin reorientation and magnetocaloric effect in orthochromites
   Duration: 3 years (starting date 01-01- 2018) Funding Agency: IUAC New Delhi, Total funds sanctioned: 0.75 Lakhs + JRF fellowship for three years: **Completed (April 2022)**
3. Size dependent magnetic properties of Mn-doped rare-earth orthochromites: A neutron powder diffraction study (**CRS-M- 298**)
   Duration: 3 years (starting date 01-01- 2018), Funding Agency: UGC-DAE CSR Mumbai, Total funds sanctioned: 1.35 Lakhs + JRF fellowship for 3 years: **Completed (December 2020)**
4. UGC start-up grant on Synthesis and characterization of charge ordered manganites for multiferroic applications
   Duration: 2 years (2014-2016), Funding Agency: UGC New Delhi, Total funds sanctioned: 6 lakhs: **Completed (July 2016)**

AWARDS AND RECOGNITIONS

- ✓ **Coordinator "**International Webinar on Trends in Physics-I**"** (IWTP 2023) organized at the Department of Physics, Central University of Rajasthan on 15 & 27 March 2023.
- ✓ **Organizing committee member** of National Webinar Series (Online) on "Experimental & Computational Tools for Materials Research (ECTMR 2020)" organized by Discipline of Natural Sciences, PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur, and the Department of Physics, Central University of Rajasthan from June 01-08, 2020.
- ✓ **Convener** "National Symposium on Technologically Advanced Functional Materials (NSTAFM-2017)" during March 16-17, 2017 Dept. Of Physics, Central University of Rajasthan.
- ✓ **Coordinator "National Science Day"**-2018 celebrated at the Central University of Rajasthan on 28th Feb 2018
- ✓ **Convener** "Healthy Lifestyle through Yoga Awareness" one day National workshop on May 14, 2018 Department of Yoga, Central University of Rajasthan.
- ✓ **Co-Coordinator** Department of Yoga, Central University of Rajasthan
- ✓ **Best Poster Award** at the "International Conference on Magnetic Materials and Applications" held at DRDL, Hyderabad, India from 1-3 Feb 2017
- ✓ **Resource Person** in Refresher Courses in Experimental Physics conducted by Indian Academy of Science, Bangalore

- ✓ Startup grant of Rs 6 Lakhs from UGC, India
- ✓ **Organizing Secretary** of the event entitled "Science for Sustainable Development of Society" on National Science Day 28th Feb 2014
- ✓ **Organizing Secretary** of the event "Knowledge Through Light" to celebrate the International Year of Light on 6th Nov 2015
- ✓ **Coordinator** of the National Science Day event on 28th Feb. 2016 at the Central University of Rajasthan
- ✓ **Coordinator** Ph.D. Physics at the Department of Physics, Central University of Rajasthan since July 2015
- ✓ **Coordinator** M.Sc. Final Year at the Department of Physics, Central University of Rajasthan from July 2013-June 2015
- ✓ **Best Poster Award** in ISIF-2011, University of Cambridge, U.K.
- ✓ "ARYABHATT AWARD" for best poster presentation at ALL INDIA SCIENCE CONGRESS (HINDI) - 2004
- ✓ Qualified National Eligibility Test (NET)-JRF, (2002) conducted by Council of Scientific and Industrial Research (CSIR), India (Among top 20%)
- ✓ Qualified GATE 2002 :Conducted by Indian Institute of Science, Bangalore,
- ✓ Cash Remunerations for the Articles "Atichalakta Ki Duniya" in the magazine "AAVISHKAR" and "Spintronics: Future of Data Storage Devices" in "INVENTION INTELLIGENCE" Published by the National Research Development Corporation, New Delhi.

COURSE ATTENDED

1. One week Online Faculty Development Program on "Advanced Pedagogical Techniques" from 25 June - 01 July, 2022 organized by Teaching Learning Centre, Ramanujan College University of Delhi
2. One Week Online Faculty Development Program on "NEP 2020: Impetus for Life Skills and Holistic Development" from 1st - 5th March 2021 [Organized by the Teaching Learning Center, Central University of Rajasthan]
3. Ten Days Online Faculty Development Program on "Teaching Learning and Assessment" 23rd November to 3rd December 2020 [Organized by the Teaching Learning Center, Central University of Rajasthan]
4. Orientation Course at Maharishi Dayanand Saraswati University Ajmer during February 1-28, 2017
5. Third Refresher Course in Materials Preparation and Measurement of Properties at I.A.Sc. Bangalore during December 2-17, 2014
6. 62nd Refresher Course in Experimental Physics at IISER Mohali during July 8-23, 2014

7. Two day workshop entitled "Saksham" organized by Microsoft at the Central University of Rajasthan from 10-11 March 2018.

MEMBERSHIP OF PROFESSIONAL BODIES

1. Life member Indian Science Congress Association (ISCA)
2. Life member Indian Association of Physics Teachers (IAPT)
3. Life member Magnetic Society of India (MSI)-LM692
4. Life Member Materials Research Society of India (MRSI)
5. Member of Instrument Society of India, Delhi Chapter, for 2003-2004
6. Member of American Physical Society (APS) from 2010-2012

TEACHING EXPERIENCE (From July 2013 to till date)

1. PHY405 & 404 Classical Electrodynamics (*Post Graduate*)
2. PHY 103 Basic Electronics (*Under Graduate*)
3. PHY 201 Modern Physics (*Under Graduate*)
4. PHY 301 Electricity & Magnetism (*Under Graduate*)
5. PHY 332 Fundamentals of Solid State Physics (*Under Graduate*)
6. PHY 407 Condensed Matter Physics (*Post Graduate*)
7. PHY 407 Electronics (*Post Graduate*)
8. PHY 408 Electronics Laboratory (*Post Graduate*)
9. PHY 533 Fundamentals of Semiconductor (*Post Graduate*)
10. PHY 541 Semiconductor Devices and Technology (*Post Graduate*)
11. PHY 531 Materials Science (*Post Graduate*)

COURSE DESIGN

1. Fundamentals of Semiconductor (*Post Graduate*)
2. Semiconductor Devices and Technology (*Post Graduate*)
3. Electronics (*Post Graduate*)
4. Materials Science (*Post Graduate*)
5. Solid State Magnetism (*Post Graduate*)

EXTRA CURRICULAR ACTIVITIES

1. **Expert Talk** on the topic "Careers in Physics" at Academia World Education fair at MPS Jaipur from 12-13 October 2017
2. **Warden** B-6 Boys Hostel since August 2017.
3. Participated in a workshop entitled "Prevention of Crime against woman" organized by RIPA Jaipur, Rajasthan from 28-30 April 2017.

4. Organizer of "Debate and Quiz" under the Aegis of SPRASH, Central University of Rajasthan, on the topic "**To Create a Better Society, it is Essential to Empower Women**" on 19th Oct 2016.
5. Coordinator of the Yoga event from 18-23th Feb. 2016 at the Central University of Rajasthan
6. Manager and male team coach for the All India University Yoga Championship from 21-23 March 2016 at Ch. Ranbir Singh University, Jind Haryana (India)
7. Coordinator of the YOGA FEST from 9-11th May 2016 at the Central University of Rajasthan

DOCTORAL THESIS GUIDANCE

S. No.	Name of the student	Thesis title	Status
1	SURENDRA KUMAR (2014PHDPH010)	Investigations on the Magnetization Reversal and Magnetocaloric effect in doped rare-earth orthochromites	Open Viva Voce held on 21 January 2019
2	RAMOVATAR (2014PHDPH005)	Studies on the dielectric, ferroelectric, piezoelectric and optical properties of barium titanate based lead – free ceramics	Open Viva Voce held on 27 August 2019
3	KOMAL KANWAR (2017PHDPH05)	Size dependent magnetic properties of transition metal doped rare-earth orthochromites	Thesis submitted on 21 December 2022
4	MAHESH KUMAR YADAV (2018PHDPH02)	Composites of Graphene oxide and piezoelectrics for energy harvesting applications	Thesis Submitted 28 February 2023
5	KULDEEP SINGH (2019 PHDPH006)	Exploring the magnetocaloric properties of bulk ceramics, nanocrystalline and thin films of manganese doped rare-earth orthochromites	Ongoing
6	MANJEET RANI (2019PHDPH007)	Tuning the optical and photocatalytic properties of $DyCrO_3$ rare-earth orthochromite for photovoltaic applications	Ongoing

RESEARCH PUBLICATIONS (In SCI Journals)

2023

1. **A study on the structural, optical, magnetization reversal and bipolar magnetic switching behavior of $SmCr_{0.85}Mn_{0.15}O_3$ nanoparticles:** K Kanwar, B R Chen, Y K Kuo, **Neeraj Panwar*: *Ceramics International* 49 (2), 2506-2514, Publication date: 15 January 2023.**
2. **Structural, optical and dielectric investigations on $RECr_{0.85}Mn_{0.15}O_3$ (RE = Ho, Gd and Pr) nanoparticles:** K Kanwar , S. Pradhan , S. Satapathy , Y. Bitla , **Neeraj Panwar*: *Journal of Rare Earths* (https://doi.org/10.1016/j.jre.2023.02.024)**

2022

3. **Optical, dielectric and photocatalytic investigation on $Dy_{1-x}Ho_xCrO_3$ (x = 0, 0.5) perovskites:** Manjeet Rani, Sajjan Dahiya, **Neeraj Panwar*: *Ceramics International* 48 (14) (2022) 19925-19936, Publication date: 15 July 2022.**
4. **Aspect ratio dependent viscoelastic properties of graphene oxide liquid crystals:** M K Yadav, S N Sangitra, **Neeraj Panwar*,** T Rimza, R K Pujala, P Kumar: ***Materials Chemistry and Physics* 287 (2022) 126305, Publication date: 24 May 2022**
5. **Optical and Low-Temperature Magnetocaloric Properties of $HoCr_{0.5}Mn_{0.5}O_3$ Compound**: Komal Kanwar, M. Vasundhara, Sandeep Kumar, Pradip Kumar, S. D. Kaushik, **Neeraj Panwar***: ***Journal of Superconductivity and Novel Magnetism* 35 (2022) 625–633, Publication date: 06 Jan. 2022.**
6. **Low-Temperature Magnetic and Magnetocaloric Properties of Manganese-Substituted $Gd_{0.5}Er_{0.5}CrO_3$ Orthochromites: Neeraj Panwar***, K. Singh, K. Kanwar, Y. Bitla, S. Kumar, V. S. Puli: ***Crystals* 12 (2022) 263 (1-9), Publication date: 15 Feb. 2022.**

2021

7. **A comparative study of the structural, optical, magnetic and magnetocaloric properties of $HoCrO_3$ and $HoCr_{0.85}Cr_{0.15}MnO_3$ orthochromites:** K. Kanwar, I. Coondoo, M. Anas, V. K. Malik, P. Kumar, S. Kumar, P. K. Kulriya, S. D. Kaushik, **Neeraj Panwar***: ***Ceramics International* 47, Issue 6 (2021) 7386-7397. Publication date: 23 Feb. 2021.**
8. **Temperature-dependent Raman spectroscopy, domain morphology and photoluminescence studies in lead-free BCZT ceramic:** I. Coondoo, **Neeraj Panwar**, S. Krylova, A. Krylov, D. Alikin, S. K. Jakka, A. Turygin, V. Y. Shur, A. L. Kholkin: ***Ceramics International* 47, Issue 2 (2021), 2828-2838. Publication**

date: 15 Jan 2021.

2020

9. **Preheated self-aligned graphene oxide for enhanced room temperature hydrogen storage:** M. K. Yadav, **Neeraj Panwar**, S. Singh, P. Kumar: ***International Journal of Hydrogen Energy,*** **Issue 38, 45(2020) 19561-19566. Publication date: 31 July 2020.**
10. ***In-situ*** **study of electrical transport in Pd/n-Si under high energy ion irradiation:** H. K. Chourasiya, P. K. Kulriya, **Neeraj Panwar,** S. Kumar: ***Semiconductor Science and Technology,*** **Number 8, 35 (2020) 085004. Publication date: 25 June 2020.**

2019

11. **Temperature dependent thermal conductivity of free-standing reduced graphene oxide/poly (vinylidene fluoride-co-hexafluoropropylene) composite thin film:** P. Kumar, M. K. Yadav, **Neeraj Panwar**, A. Kumar and R. Singhal: ***Materials Research Express,*** **6 (2019) 115604. Publication date: 2 October 2019.**
12. **Observation of large enhancement in energy storage properties of lead free polycrystalline $0.5BaZr_{0.2}Ti_{0.8}O_3$-$0.5Ba_{0.7}Ca_{0.3}TiO_3$ ferroelectric thin films:** V. Puli, D. Pradhan, I. Coondoo, **Neeraj Panwar**, S. Adireddy, S. Luo, R. Katiyar, D. Chrisey: ***Journal of Physics D: Applied Physics*** **52 (2019) 255304. Publication date: 18 April 2019.**
13. **Structural, Electrical, Optical and Magnetic Properties of $SmCrO_3$ chromites: Influence of Gd and Mn co-doping: Neeraj Panwar**, I. Coondoo, S. Kumar, Sandeep Kumar, M. Vasundhara, Ashok Rao: ***Journal of Alloys and Compounds*** **792 (2019) 1122-1131. Publication date: 12 April 2019.**
14. **Observation of large electrocaloric properties in lead-free $Ba_{0.98}Ca_{0.02}Ti_{0.98}Sn_{0.02}O_3$ ceramics:** Ramovatar, I. Coondoo, P. Kumar, A. A. Khan, S. Satapathy and **Neeraj Panwar:** ***AIP Advances*** **9 (2019) 055010. Publication date: 14 May 2019.**
15. **Impact of Tin substitution on the structural, dielectric, ferroelectric and piezoelectric properties of $Ba_{0.98}Ca_{0.02}TiO_3$ ceramics:** Ramovatar, Indrani Coondoo, S. Satapathy and **Neeraj Panwar:** ***Physica B: Condensed Matter*** **553 (2019) 68-75. Publication date: 15 January2019.**
16. **Analysis of the carrier conduction mechanism in 100 MeV O^{7+} ion irradiated Ti/*n*-Si Schottky barrier structures:** H. K. Chourasiya, P.K. Kulriya, **Neeraj Panwar** and S. Kumar: ***Nuclear Inst. And Methods in Physics Research, B*** **443(2019)43-47. Publication date: 15 March 2019.**

2018

17. **Observation of Magnetization reversal behavior in $Sm_{0.9}Gd_{0.1}Cr_{0.85}Mn_{0.15}O_3$ orthochromites:** **Neeraj Panwar,** J. P. Joby, S. Kumar, I. Coondoo, M. Vasundhara, N. Kumar, R. Palai, R. Singhal, and R. S. Katiyar: ***AIP Advances* 8 (2018) 055818.**
18. **Structural, microstructural, ferroelectric and photoluminescent properties of praseodymium modified $Ba_{0.98}Ca_{0.02}Zr_{0.02}Ti_{0.98}O_3$ ceramics:** Ramovatar, I Coondoo, S. Satapathy, **Neeraj Panwar: *Ceramics International* 44 (2018) 1690-1698.**
19. **A comparative study of structural and electrical properties in lead-free BCZT ceramics: influence of the synthesis method:** I. Coondoo, **Neeraj Panwar,** D. Alikin, A. Turygin, V. Shur, I. Bdikin, S. S. Islam and A. Kholkin: ***Acta Materialia* 155 (2018) 331-342.**
20. **Dielectric enhancement and photoluminescent behavior in low temperature sintered Pr – modified $Ba_{0.85}Ca_{0.15}Zr_{0.1}Ti_{0.9}O_3$ ceramics:** Ramovatar, I. Coondoo, S. Satapathy, N. Kumar and **Neeraj Panwar: *Journal of Electronic Materials* 47 (2018) 5870-5878.**
21. **Low temperature magnetic and magnetocaloric studies in $YCr_{0.85}Mn_{0.15}O_3$ ceramic:** **Neeraj Panwar,** S. Kumar, I. Coondoo, M. Vasundhara, and N. Kumar: ***Physica B: Condensed Matter* 545 (2018) 352-357.**

2017

22. **Structural, Magnetic, Magnetocaloric and Specific heat Investigations on Mn doped $PrCrO_3$ Orthochromites:** S. Kumar, I. Coondoo, Vasundhara M., Sandeep Kumar, Andrei Kholkin, **Neeraj Panwar: *Journal of Physics: Condensed Matter* 29 (2017) 195802.**
23. **Impact of low level praseodymium substitution on the magnetic properties of $YCrO_3$ orthochromites:** S. Kumar, I. Coondoo, A. Rao, B.-H. Lu, Y.-K. Kuo, A. L. Kholkin, **Neeraj Panwar: *Physica B: Condensed Matter* 510 (2017) 104-108.**
24. **Magnetization reversal behavior and magnetocaloric effect in $SmCr_{0.85}Mn_{0.15}O_3$ chromites:** S. Kumar, I. Coondoo, M. Vasundhara, A. K. Patra, **A.** L. Kholkin and **Neeraj Panwar: *Journal of Applied Physics* 121 (2017) 043907.**
25. **Observation of negative magnetization and Magnetocaloric Effect in Manganese doped $EuCrO_3$ Orthochromites:** S. Kumar, I. Coondoo, M. Vasundhara, V. S. Puli, and **Neeraj Panwar: *Physica B: Condensed Matter* 519 (2017) 69-75.**

2016

26. **Defect chemistry and relaxation processes: effect of an amphoteric substituent in lead-free BCZT ceramics:** I. Coondoo, **Neeraj Panwar**, R. Vidyasagar and A. L. Kholkin: ***Physical Chemistry Chemical Physics* 18 (2016) 31184.**

2015

27. **Enhanced piezoelectric properties of praseodymium modified lead free $(Ba_{0.85}Ca_{0.15})(Ti_{0.90}Zr_{0.10})O_3$ ceramics:** Indrani Coondoo, **Neeraj Panwar**, H. Amorín, V. E. Ramana, M. Algueró and A. L.Kholkin: ***Journal of the American Ceramic Society 98* (2015)3127-3135.**

28. **Improved piezoelectric and energy harvesting characteristics in lead-free Fe_2O_3 modified KNN ceramics:** Indrani Coondoo, **Neeraj Panwar**, H. Maiwa and **A.** L. Kholkin: ***Journal of Electroceramics* 34(2015) 255-261.**

2014

29. **Structural and magnetic studies on praseodymium and transition-metal co-substituted $BiFeO_3$ ceramics:** Indrani Coondoo, **Neeraj Panwar**, V. S. Puli, V. E. Ramana, A. L. Kholkin and R. S. Katiyar: ***Multiferroic Materials,* 1 (2014) 23-26.**

30. **Magnetoelectric coupling effect in transition metal modified polycrystalline $BiFeO_3$ thin films:** V. S. Puli, D. K. Pradhan , S. Gollapudi , I. Coondoo, **Neeraj Panwar**, S. Adireddy, D. B. Chrisey, R. S. Katiyar: ***Journal of Magnetism and Magnetic Materials* 369 (2014) 9-13.**

31. **Photovoltaic effect in transition metal modified polycrystalline $BiFeO_3$ thin films:**Venkata S. Puli, D. K. Pradhan, R. K. Katiyar, I. Coondoo, **Neeraj Panwar**, P. Misra, D. B Chrisey, J F Scott and R. S Katiyar: ***Journal of Physics D: Applied Physics* 47 (2014) 075502.**

32. **Structural, dielectric and impedance spectroscopy studies in $(Bi_{0.90}R_{0.10})Fe_{0.95}Sc_{0.05}O_3$ [R=La, Nd] ceramics:** Indrani Coondoo, **Neeraj Panwar**, M. A. Rafiq, V. S. Puli, M. N. Rafiq, R. S. Katiyar: ***Ceramics International* 40 (2014) 9895-9902.**

2013

33. **Synthesis and characterization of lead-free $0.5Ba(Zr_{0.2}Ti_{0.8})O_3$-$0.5(Ba_{0.7}Ca_{0.3})TiO_3$ ceramic:** Indrani Coondoo, **Neeraj Panwar**, H. Amorín, Miguel Alguero , Andrei Kholkin: ***Journal of Applied Physics* 113 (2013) 214107.**

34. **Synthesis and Physical Properties of Ca- and Ta- modified $(K,Na)NbO_3$ lead free piezoelectric ceramics :** I. Coondoo, **Neeraj Panwar**, R. Rai, H. Amorin , A. L. Kholkin: ***Phase Transitions,* 86(11), 1130-1140 (2013).**

35. **Voltage-dependent domain evolution in $La_{0.89}Sr_{0.11}MnO_3$ single crystals by Piezoresponse Force Microscopy: Neeraj Panwar*,** Indrani Coondoo and A. L. Kholkin: ***Solid State Communications* 164 (2013) 38-41.**

2012

36. **Nanoscale piezoresponse and magnetic studies of multiferroic Co and Pr co substituted BFO thin films:** **Neeraj Panwar***, I. Coondoo, A. Tomar, A. L. Kholkin, V. S. Puli and R. S. Katiyar: ***Materials Research Bulletin* 47 (2012) 4240. (Cover Page Article)**
37. **Domain growth kinetics in $La_{0.89}Sr_{0.11}MnO_3$ single crystal studied by piezoresponse force microscopy:** **Neeraj Panwar***, I. K. Bdikin, A.N. Morozovska, and A. L. Kholkin: ***Journal of Applied Physics* 112 (2012) 052019.**
38. **Improved magnetic and piezoresponse behavior of cobalt substituted BiFeO3 thin film:** I. Coondoo, **Neeraj Panwar**, I. Bdikin, A. L. Kholkin, V. S. Puli and R. S. Katiyar: ***Thin Solid Films* 520 (2012) 6493.**
39. **Structural, morphological and piezoresponse studies of Pr and Sc co-doped $BiFeO_3$ Ceramics:** Indrani Coondoo, **Neeraj Panwar**, I. Bdikin, V. S. Puli, R. S. Katiyar and A. L. Kholkin: ***Journal of Physics D: Applied Physics* 45 (2012) 055302.**
40. **Structural, morphological and enhanced ferroelectromagnetic properties of $Ba_{0.7}Ca_{0.3}TiO_3/BaFe_{0.2}Ti_{0.8}O_3$ multiferroic composites:** V. S. Puli, I. Coondoo, **Neeraj Panwar**, A. Srinivas and R. S. Katiyar: ***Journal of Applied Physics* 111(2012) 102802.**
41. **Temperature dependent magnetic, dielectric studies of Sm-substituted bulk $BiFeO_3$:** Venkata S. Puli, D. K. Pradhan, R. Martinez, I. Coondoo, **Neeraj Panwar,** R. S. Katiyar: ***Journal of Superconductivity and Novel Magnetism* 25 (2012) 1109.**
42. **Impedance and dc conductivity studies in wolframium substituted Strontium Bismuth Tantalate:** Indrani Coondoo, **Neeraj Panwar**, Amit Tomar, A. K. Jha and S. K. Agarwal; ***Physica B: Condens. Mater.* 407 (2012) 4712.**
43. **Effect of the grain size on the magnetic phase separation in $La_{0.8}Sr_{0.2}MnO_3$ by magnetic force microscopy:** P. De Sousa, **Neeraj Panwar**, I. Bdikin, A. L. Kholkin, C.M. Fernandes, A.M.R. Senos, ***Microscopy and Microanalysis* 18 (2012) 101.**

2011

44. **Structural and optical analysis of ZnBeMgO powder and thin films:** **Neeraj Panwar***, J. Liriano, Ram S. Katiyar: ***Journal of Alloys and Compounds* 509 (2011) 1222.**

45. **Nanoscale Electromechanical Properties of $CaCu_3Ti_4O_{12}$ Ceramics:** R. Tararam, I. K. Bdikin, **Neeraj Panwar**, J. A. Varela, P. R. Bueno, A. L. Kholkin: ***Journal of Applied Physics* 110 (2011) 052019.**
46. **Transition metal modified bulk $BiFeO_3$ with improved magnetization and linear magneto-electric coupling:** V. S. Puli, A. Kumar, **Neeraj Panwar**, I. C. Panwar, R. S. Katiyar; ***Journal of Alloys and Compounds* 509 (2011) 8223-8227.**
47. **Room Temperature Ferromagnetism in Co-doped Titania Thin Films:** Sudesh Sharma, S. Chaudhary, **Neeraj Panwar**, S. Kashyap, Dinesh Pandya: ***Journal of Nanoscience and Nanotechnology* 11(2011) 2743.**
48. **Effect of sintering temperature on the structural, dielectric and ferroelectric properties of tungsten substituted SBT ceramics:** Indrani Coondoo, **Neeraj Panwar** and A. K. Jha: ***Physica B: Condensed Matter* 406 (2011) 374.**
49. **A comparative study of oxygen loss on in-situ heating in $PrMnO_3$ and $BaMnO_3$** : K. B. Garg, M. Heinonen, P. Nordblad, S. Dalela, **Neeraj Panwar**, V. Sen, S. K. Agarwal, and Neha Sharma: ***International Journal of Modern Physics B* 25 (2011) 1235.**
50. **Ferroelectric and piezoelectric studies on Mo-substituted $SrBi_2Ta_2O_9$ ferroelectric ceramics:** Indrani Coondoo**,** **Neeraj Panwar**, Venkata S. Puli, and R. S. Katiyar: ***Integrated Ferroelectrics* 125(2011) 1-9.**
51. **ZnBeMgO thin films based UV Detectors by Spin Coating:** **Neeraj Panwar***, J. Liriano and Ram S. Katiyar : ***MRS Proceedings,*** 1315(2011) mrsf10-1315- mm05-03- f0503 doi:10.1557/opl.2011.775.

2010

52. **Low field magnetoresistance, temperature coefficient of resistance and magnetocaloric effect in $Pr_{2/3}Ba_{1/3}MnO_3$: PdO composites:** **Neeraj Panwar***, I. Coondoo, S. K. Agarwal: ***Materials Letters* 64 (2010) 2638.**
53. **Intrinsic and extrinsic transport properties of $Pr_{0.67}Ba_{0.33}MnO_3$: Ag_2O composites:** **Neeraj Panwar***, Indrani Coondoo, R. S. Singh and S. K. Agarwal: ***Journal of Alloys and Compounds* 507 (2010) 439-442.**
54. **Thermal properties of $La_{2/3}Ba_{1/3}(Mn_{1-x}Sb_x)O_3$ manganites:** **V**ikram Sen, G. L. Bhalla, **Neeraj Panwar**, W. K. Syu, N. Kaurav, Y. K. Kuo, Ashok Rao and S. K. Agarwal: ***Physica B: Condensed Matter* 405 (2010)1-4.**
55. **Structural, electrical and thermal studies of Nb-doped $Pr_{0.7}Sr_{0.3}Mn_{1-x}Nb_xO_3$ ($0 \leq x \leq 0.03$) manganites:** S. K. Agarwal, Neeraj Kumar, **Neeraj Panwar**, B.

Gahtori, Ashok Rao, P. C. Chang and Y. -K. Kuo: ***Solid State Communication* 150(2010)684-688.**

56. **Structural, dielectric and magnetic properties of Pr substituted $Bi_{1-x}Pr_xFeO_3$ ($0 \leq x \leq 0.15$) multiferroic compounds:** N. Kumar, **Neeraj Panwar**, B. Gahtori, N. Singh, H. Kishan and V.P.S. Awana: ***Journal of Alloys and Compounds* 501(2010) L29-L32.**
57. **Effect of W substitution in Strontium Bismuth Tantalate Ferroelectric Ceramics: Enhanced Ferroelectric properties:** Indrani Coondoo, **Neeraj Panwar**, A. M. Biradar and A. K. Jha: ***Proceedings 2010 MRS Spring Meeting,* 1250 (2010) pp.1250-G16-02.**

2009

58. **Enhanced room temperature coefficient of resistance and magneto-resistance of Ag added $La_{0.7}Ca_{0.3-x}Ba_xMnO_3$:$Ag_x$ composites:** R. Tripathi, V. P. S. Awana, **Neeraj Panwar**, G.L. Bhalla, H. U. Habermier, S. K. Agarwal, and H. Kishan: ***Journal of Physics D: Applied Physics* 42(2009) 175002.**
59. **Nano-vanadium Doping-Driven Low Temperature Structural Phase Transformation in Titania:** A. Kumar, B. Gahtori, N. Kumar, V.P.S. Awana, A. K. Srivastava, **Neeraj Panwar**, H. Kishan and I. Felner: ***Modern Physics Letters B* 23 (2009)3543-3549.**
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National:

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International:

1. Investigation of magnetization reversal and it's suppression in Mn doped $SmCrO_3$ orthochromite
   Surendra Kumar, I. Coondoo, M. Vasundhara, Vinod Kumar, A. K. Patra, **Neeraj Panwar** Oral Presentation at ICTAM-AMF2016, University of Delhi, India (Nov 7-11, 2016)
2. Microstructural, Dielectric and AC conductivity investigations on sol-gel derived $Ba_{0.85}Ca_{0.15}Ti_{0.9}Zr_{0.1}O_3$ ceramics
   I. Coondoo, Ramovatar, A. L. Kholkin and **Neeraj Panwar**
   Poster Presentation at ICTAM-AMF2016, University of Delhi, India (Nov 7-11, 2016)
3. Effect of neodymium addition on dielectric and piezoelectric properties in lead-free (K, Na, Li)$Nb_{1-x}Sb_xO_3$ ceramics
   Neeraj Panwar, Indrani Coondoo, Harvey Amorin and Andrei Kholkin
   Oral presentation in 13th European Meeting on Ferroelectricity, University of Porto Portugal (June 28-July 03, 2016)
4. Structural and electrical studies in $(Bi_{0.90}Sm_{0.10})Fe_{1-x}Sc_xO_3$ ceramics
   Neeraj Panwar, Indrani Coondoo, E. Venkata Ramana, Venkata S. Puli, A. L. Kholkin, R.S. Katiyar
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5. Effect of praseodymium oxide additive on structural and electrical properties of
5. Effect of praseodymium oxide additive on structural and electrical properties of
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11. Structural, morphological and piezoresponse studies of $Bi_{0.9}Pr_{0.1}Fe_{1-x}Sc_xO_3$ ($0 \leq x \leq 0.07$) ceramics: Indrani Coondoo, **Neeraj Panwar**, I. Bdikin, V. S. Puli, R. S. Katiyar and A. L. Kholkin:
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20. Bias-induced hysteresis and nanoscale multiferroic properties in $[Pr(La)]_{1-x}Ca_xMnO_3$ studied by scanning force microscopy
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21. ZnBeMgO Nanostructured Based UV Detectors by Spin Coating **Neeraj Panwar**, Jose Liriano, Ram Katiyar:
MRS-USA, Fall Meeting 2010.

22. Mg and Be doped ZnO Ultraviolet photoconductive detector Jose M. Liriano R, **Neeraj Panwar**, Ram Katiyar
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23. Growth of ZnBeMgO films by pulsed laser deposition
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24. Dielectric and Magnetic Properties of $Bi_{1-x}Sm_xFeO_3$ $(0 \leq x \leq 1)$
1. Melgarejo, Venkata Puli, **Neeraj Panwar**, Reji Thomas, Ram Katiyar
American Physical Society Meeting, March 14-19, 2010, Portland, USA.

25. Low field Magneto-transport behaviour of $Pr_{2/3}Ba_{1/3}MnO_3+Ag_2O$ composite manganites: **Neeraj Panwar**, D. K. Pandya and S. K. Agarwal
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26. Improvement of Conduction, Magnetotransport and Temperature Coefficient of Resistance (TCR) in Pr2/3Ba1/3MnO3 + Ag2O Composite Perovskite Manganites: **Neeraj Panwar**, A. Singhal and S. K. Agarwal
10^{th} International Conference on Advanced Material (ICAM), Bangalore-India.

27. Room Temperature Ferromagnetism in Co-doped Titania Thin Films
Sudesh Sharma, Sujeet Chaudhary, **Neeraj Panwar**, Subhash Kashyap, Dinesh Pandya; Int. Conf. on Advanced Materials for Technologies (ICMAT)-2009, Singapore.

➢ **Book Chapters**

1. Advanced Sensor Materials for Aerospace applications: G. W. Hunter, J. C. Xu, L. J. Evans, L. F. Fonseca, Ram Katiyar, M. M. Martinez Inesta, W. Otano, **Neeraj Panwar**,Randy L. Vanser Val
Advanced nanomaterials for aerospace applications, Eds. Carlos R. Cabrera and Felix A. Miranada, CRC Press, Taylor and Francis Group.

2. Enhanced dielectric and ferroelectric properties of donor (W+6, Eu+3) substituted SBT ferroelectric ceramics: Indrani Coondoo and **Neeraj Panwar**
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3. Structural, Morphological, Magneto-Transport and Thermal Properties of Antimony Substituted $(La,Pr)_{2/3}Ba_{1/3}Mn_{1-x}Sb_xO_3$ Perovskite Manganites
Neeraj Panwar, Indrani Coondoo, Vikram Sen and S. K. Agarwal Intech Open Access Publisher, Croatia. ISBN 978-953-307-350-7

➢ **Review Article**

Lead-free piezoelectrics: current status and perspectives; Indrani Coondoo, **Neeraj Panwar**, and Andrei Kholkin Journal of Advanced Dielectrics Vol. 3, No. 2 (2013) 1330002 (22 pages).

- **Book**

1. Perovskite and Piezoelectric Materials

   (Editors: Someshwar Pola, Neeraj Panwar, Indrani Coondoo)

   Publisher: Intech Publishers: ISBN: 978-1-78985-665-1 (Print), 978-1-78985-666-8 (Online), Year of Publish: April 2021

2. Magnetism and Magnetic Materials (Editor: Neeraj Panwar)

   Publisher: Intech Publishers: ISBN: 978-1-78923-679-8

   Print ISBN: 978-1-78923-678-1, Year of Publish: Sep 2018

3. Magneto-transport, magnetic and thermal studies in manganites

   Publisher: Scholars' Press: ISBN: 3639664655, Year of Publish: Sep 2014

- **Reviewer of the SCI Journals**

Journal of Applied Physics
RSC Advances
Journal of Magnetism and Magnetic Materials
Journal of Alloys and Compounds
Journal of Superconductivity and Novel Magnetism
Ceramics International
Materials Research Bulletin
Materials Letters
Physica B: Condensed Matter
Vacuum
Journal of Materials Science: Materials in Electronics
Solid State Sciences
Solid State Communications
Journal of Solid State Chemistry

- **Invited Talks**

1. Optical and magnetocaloric properties of $HoCr_{0.5}Mn_{0.5}O_3$ compound, 4th International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME2021) as a held in the University of Aveiro, Portugal from 6 to 9 July 2021 (ONLINE).

2. Manganese substitution effect on the structural, optical, magnetic and magnetocaloric properties of $HoCrO_3$ orthochromite, 3rd International Conference on Nanomaterials Science and Mechanical Engineering

(ICNMSME2020) as an Invited Speaker with lecture, held in the University of Aveiro, Portugal from 7 to 10 July2020 (ONLINE).

3. Magnetization reversal and low temperature magnetocaloric effect in rare-earth orthochromites: Impact of doping, 2nd International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME2019) at the University of Aveiro, Portugal from 9 to 12 July 2019.

4. Scanning Probe Microscope: An Indispensable Tool for Nanoworld, National Workshop on Nanotechnology for Futuristic Engineering Applications (NWNFEA-2016), 19 November 2016 at Poornima University, Jaipur (India).

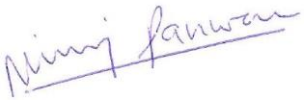
5. Light Emitting Diodes: From Basics to Nobel Prize Winning Invention, Series of Talks on Nobel Laureates, 2 February, 2018 at the Central University of Rajasthan.

- **Session Chair**

1. Chair of sessions “Composite Materials”, “New Energy Materials” and “Ceramics”, 4th International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME2021) as a held in the University of Aveiro, Portugal from 6 to 9 July 2021.

2. Chair of sessions "Protective Coatings and Corrosion of Materials" and "Nanotechnology", 3rd International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME2020) as a held in the University of Aveiro, Portugal from 7 to 10 July 2020.

3. Chair of session “Nanotechnology”, 2nd International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME2019) at the University of Aveiro, Portugal from 9 to 12 July 2019.



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