

Curriculum Vitae

Ram Pal Tandon

Professor and Former Head

Department of Physics & Astrophysics

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Date of Birth: **November 24, 1950**

Place of Birth: **Amritsar, Punjab**

Administrative Experience : **25 years**

Teaching & Research Experience : **37 years (including post graduate teaching)**

Qualification

Ph.D. (Physics), Delhi University, India in 1977.

Present Job Position

Professor of Physics at the Department of Physics and Astrophysics, University of Delhi, New Delhi, India, and held the post of Head of Department for period of three years (Nov. 2010-Nov. 2013)

Past Job Positions

1. Served as a **Scientist** in the National Physical Laboratory, New Delhi from 1977-1997 as the **Head of the Electroceramics Group**.
2. “**Scientific Advisor**” to the Govt. of Haryana at Chandigarh, January-August 1996. This was the highest scientific position in state equivalent to a Secretary. Overall responsible for the growth of science in the state of Haryana with particular focus on the development of non-conventional energy in the state and to advice the Government on various scientific aspects.

Research Positions held

- ❖ Worked as Post-doctoral Research Associate at **Massachusetts Institute of Technology, (MIT), USA**, Feb. 1980 - June 1982 (2 years 5 months).
- ❖ British Council Fellow at the **University of Leeds (U.K.)** 1987.
- ❖ Awarded Natural Science & Engineering Research Council (NSERC/CIDA) Associateship of Canada to work at **Queen's University, Kingston, Canada** (1994-95).
- ❖ Visiting Scientist for one year (1994) at **University of Quebec, Canada** and subsequently **Five** times after that during summer vacations.
- ❖ Invited by the **Seoul National University** to deliver talks for 2 weeks in November, 1996.
- ❖ Visiting Professor, **University of Angers (France)** July, 2008.
- ❖ Visited **New Mexico, Mexico** as Co-Principal Investigator in the project “Theoretical and Experimental Study Formation of RF Waves” under Indo-Mexican S&T program of Cooperation, July 2010
- ❖ Visiting Scientist, **University of Leeds, United Kingdom** in July 2010.
- ❖ Visited **National Dong Hwa University, Taiwan** during October 10 – 26, 2014 under Indo-Taiwan S&T Cooperation project “Metal Oxide Nanowire Based Nanoelectronic Devices”.
- ❖ Visited **National Dong Hwa University, Taiwan** in October 2015.

Countries Visited

USA, Australia, Canada, UK, France, Singapore, South Korea, Thailand, Hong Kong, China, Singapore, Tanzania, etc.

Research interest

- Thin Films and Nanotechnology
- Semiconductor Physics.
- Ferroelectric Ceramics for oceanography, biomedical and consumer electronics etc and other various applications.
- Synthesis and characterization of PZT ceramics and lead titanate based thin films.
- Processing and characterization of nano-materials and devices based there of.

- Development of microwave dielectric materials for resonators and filters.
- Conducting Polymers and Organic Solar Cells.
- Quantum Dots
- Synthesis and Characterization of Magnetic Nanoparticles For Use In Hyperthermia For Cancer Treatment
- Synthesis and Characterization of Solution-Processed Reduced Graphene Oxide Films As Transparent Electrode Material For Organic Solar Cell and sensor Applications
- Thin and thick film devices.
- Dielectric & electrical properties of materials.
- Gas sensors based on ceramics and polymers.

Distinctions and Awards

1. **Life Time Achievement Award** in the field of Electron Microscopy conferred by Electron Microscope Society of India (EMSI) 2nd June, 2016.
2. **Member of the Lab Research Council of Laser Science & Technology Centre (LASTEC)**, New Delhi (2015-16).
3. **Governor's nominee** - University of Jammu for period 2015-18, to participate in the selection process of Lecturer, Assistant Professor, Associate Professor and Professor.
4. **Governor's nominee** in the Council, University of Jammu for period 2012-15.
5. **Chairman**, Governing Body, Keshav Mahavidyalaya, University of Delhi (2014-15).
6. **Chief Patron** of Electron Microscope Society of India (EMSI), July 2012.
7. MRSI-ICSC Superconductivity & Materials Science **Annual Prize (2013)**.
8. Recipient of **national award** on Ferroelectrics by Pandit Ravi Shankar University, Raipur.
9. **Member**, Advisory Committee, Centre of Nanoscience & Technology Research (CNTR), Saurashtra University, Rajkot, Gujarat (2012-15).
10. **Convener**, Curriculum Committee for Physics for Senior Secondary Education, CBSE, New Delhi
11. **National Convener** of e-Pathshala project, for postgraduate (Physics) courses, University of Delhi, sponsored by MHRD.
12. National Science Scholarship by MHRD.

13. Governing **council member** of Inter University Accelerator Centre (IUAC), New Delhi (2012-14).
14. **Reviewer**, various project review committee's like Defence Research and Development Organization (D.R.D.O.) and D.I.T etc.
15. **Governing body member** for many prestigious Delhi University colleges e.g. **St. Stephen, ARSD, K.M.V. and Delhi college of Engineering.**
16. **Member**, Board of Research Studies (BRS) under the Faculty of Technology, Delhi University (2012-14).
17. **Expert member** for **Defence Research and Development Organization (D.R.D.O.), C.S.I.R.**, and various state and central universities.
18. Ph.D. examiner of several IITs, central and state universities.
19. Organized DST-PAC meeting at University of Delhi in September 2008.
20. Organized **Six** CPDHE refresher courses in Physics and Electronics at University of Delhi.
21. **Coordinator**, DSA-SAP (UGC)
22. Organized two structured workshops at National Physical Laboratory CSIR-NPL and University of Delhi.
23. **Member**, Empowered committee of **MNRE** on solar energy funding to various institutes.
24. **Member, BOS** of School of Sciences, **IGNOU**, New Delhi
25. Member Board of Studies in Physics - **Kurukshetra University**, Kurukshetra.
26. Member Board of Studies in Physics- **Indira Gandhi University**, Meerpur, Rewari, 2015-.

Membership of Professional Societies:

- **Chief Patron**, Electron Microscope Society of India.
- **Founder President**, Society for Technologically Advanced Materials of India.
- **Elected President**, Electron Microscopy Society of India (EMSI) (2009 – 2011)
- **Vice president & Fellow** “Ultrasonic Society of India”
- **Member**, MRS (USA).
- **Life Member**, “Material Research Society, India”.

- **Fellow and Ex-Council Member** “Acoustical Society of India”.
- **Life Member**, “Carbon Society of India”
- **Founder Member** of “Asian Meeting of Ferroelectrics”.
- Members of several national scientific committees and panels.
- **Member** of International Advisory Committee of International Conference on Electroceramics (ICE)
- **Editorial Member**, Journal of Advanced Dielectrics (World Scientific).
- **Board member** of Inter-University Accelerator Centre (IUAC), India
- **Member** of Editorial board of international journal: Integrated Ferroelectrics
- **Associate Editor**, international journal: Radiation Effect and Defects in Solids.
- Reviewer of several international journals like Material Science Bulletin, Sensors and Actuators, IEEE, Alloys and Compounds, Journal of Dielectrics and Langmuir etc.

Patent

Title - ‘Solar Water Distiller’, Patent Application 472/DEL/2013, India. Name of contributors: Prof. R. P. Tandon, Dr. (Mrs.) Swati Arora, Dr. Samta Goyal, Dr. Anuradha Marwah, Dr. Mohammad Fahim.

Books published

1. Editor, Integrated Ferroelectrics, Taylor Francis UK, (For Volume 114 – 122), 2010, ISBN: 1058-4587
2. Advances in Technologically Important Crystal, Macmillan, India, 2006, ISBN: 9781403931528
3. Ferroelectrics and Dielectrics, Allied Publishers, India, 2004.
4. Advances in Superconductivity and its Applications in Microwaves, Allied Publishers, India, 1998, ISBN: 81-7023-848-10

Research Experience

1. Ferroelectric and Dielectric Materials: Synthesis and characterization of ferroelectric materials based on PZT, PMN and polymer ceramic composites for hydrophones and other underwater devices. Also investigating the dielectric properties of ceramic resonators. Operated a pilot for the fabrication of piezoelectric transducers.

2. Solid Electrolyte (Glasses & Ceramics): Worked on the synthesis of B-Alumina for application in Na/S battery. The material prepared was capable of delivering upto 300 ma/cm² (1979-1986).
3. Technical ceramics: Development of alumina, steatite and other technical ceramics.
4. Amorphous semiconductors: Studied various glass systems such as V2O5-P2O5 and WO3-P2O5 etc. for their a.c. and d.c. conductivity from 77-800K over broad frequency range upto microwave. Also investigated dielectric behavior. Thermoelectric Power, Switching Effects in these materials.
5. Conducting Polymers: Synthesis and electrical characterization of conducting polymers such as polypyrrole and polyaniline and fabricated sensor based on nanocomposites.
6. Growth and characterization of semiconductor quantum dots.

Number of publications: 206, RG Factor-36 (List attached).

Ph.D. supervision: 25 awarded Ph.D. degrees; and supervising **7** more PhD students.

Research Projects

Agency	Title of Project	Period of Support	Total Cost	Remarks
GAIL (Ministry of Coal)	Development of metal oxide thin film based low cost sensor	Sept. 2013-2015	95.40	Ongoing
LSRB, DRDO	Synthesis and characterization of magnetic nanoparticles for tumor treatment using magnetic fluid hyperthermia.	2.5 years	43 Lacs	Ongoing
DRDO	Study of Thermoelectric Properties of Doped and Nano Composites of Ca ₃ Co ₄ O ₉ Ceramics and Hot Pressed Bismuth Telluride (Bi ₂ Te ₃) in the Temperature Range (300-500K)	2 Years	85.4824 Lacs	Ongoing
DIT	Demonstration of LED by Pulsed Laser Deposition (PLD) Technique	2.5 Years	475.44 Lacs	Ongoing

Indo-Taiwan S&T Cooperation programme	Metal Oxide Nanowire Based Nanoelectronic Devices	3 Years	38 Lacs	Ongoing
DST	Validation and improvement of indigenously developed table-top Surface Plasmon system (SPR) system	March 15-Jan.16	86.31	Ongoing
DST	Development of thin film Surface Acoustic Wave device as a platform for the sensing applications	Nov.2014-19	424.38	Ongoing
UGC	e-Pathshala for Material Science conctect for M.Sc.	Nov. 2014-2015	112.00	Ongoing
INMAS-CARS	Synthesis & Characterization of Magnetic Nanoparticles for uses in Hypothermia for Cancer Treatment	1.5 Year (31-07-2012 to 31-01-2014)	9.84 Lacs	Completed Successfully
DST-Purse	Developement of Polymer Photovoltaic Devices	3 Years (2010-2013)	52.66 Lacs	Completed Successfully
Indo-Maxican S&T Program of Cooperation	Theoretical and Experimental Study Formation of RF Waves	3 Years (2009-2012)	50 Lacs	Completed Successfully
DST	Oxide Films for Infrared Applications	3 Years (2008-2011)	37.48 Lacs	Completed Successfully
DST	Semiconductor Quantum Dots for Optical Storage Applications	3 Years (2008-2011)	46.0 Lacs	Completed Successfully
DRDO	Synthesis, Microstructural and Physical Properties of Monolithic Silicon Carbide Foams	3 Years (2008-2011)	49.54 Lacs	Completed Successfully
DRDO	Synthesis and Characterization of Nano Crystalline Lead Titnate Ceramics	3 Years (2007-2010)	14.90 Lacs	Completed Successfully
LASTEC	Synthesis and Characterization of Quantum Dots	2 Years (2008-2010)	10.0 Lacs	Completed Successfully

SSPL	Development of Thick PZT Films by Modified Sol-Gel Technique	3 Years (2005-2008)	9.98 Lacs	Completed Successfully
NSC	Swift Heavy Ion Irradiation Induced on Charged Order Manganites	3 years (2005-2008)	3.81 Lacs	Completed Successfully
UGC	Studies and Development of Oxygen Gas Sensors based on Glasses	3 Years (2003-2006)	4.82 Lacs	Completed Successfully

Conferences and seminars organized

1. Organizing “International Conference on Technologically Advanced Materials and Asian Meeting on Ferroelectricity (ICTAM-AMF10)” scheduled for November 7-11, 2016 University of Delhi as Chairperson, Visit website <http://www.amf2016.in/> for more information.
2. Organized "National Workshop on Electron Microscopy and Allied Techniques" scheduled for December 21-23, 2015 at University of Delhi as Chairperson.
3. Organized “International Conference on Electron Microscopy & XXXV Annual Meeting of Electron Microscope Society of India (EMSI)” held during July 9-11, 2014 and a Pre-Conference Workshop during July 7-8, 2014 at University of Delhi as Chairperson.
4. Organized “International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials (ICWNCN – 2012)” held during 13 – 16 March, 2012 at University of Delhi as Chairperson.
5. Organized “International Conference on Electroceramics” held during 13 – 17 December, 2009 at University of Delhi as Chairperson.
6. Organized national conference on “Electron Microscopy and Allied Fields” and XXX Annual Meeting of Electron Microscope Society of India (EMSI) held at Bundelkhand University, Jhansi during 17 -19 January, 2009. (Chairman of Advisory Committee and President of the Electron Microscope Society)
7. National Conference on “Electron Microscopy and Allied Fields” and XXIX Annual Meeting of Electron Microscope Society of India (EMSI) during November 26-28, 2007. as Chairperson.
8. “National Conference on Advances in Technologically Important Crystals”, during

October 12-14, 2006, at University of Delhi as Chairperson.

9. “Multifunctional Nanomaterials, Nanostructures and Applications - 2006 (MNNA 2006)” at University of Delhi during December, 2006 as Co – Chair.
10. “Thirteenth National Seminar on Ferroelectrics & Dielectrics” in November 2004 as Chairperson.
11. “National Conference on Materials, Components and Applications and Applications” in February 2003 as Co – Chair.
12. “International conference on Current Developments in Atomic, Molecular & Optical Physics with Applications” in March 2002. (Member Advisory Committee)
13. Seminar on “Advances in Superconductivity and its Applications in Microwaves” in Dec. 1998. (Secretary)
14. “Ninth National Seminar on Ferroelectrics & Dielectrics” in Oct. 1996 as Chairperson. The detail of this conference was published in Ferroelectricity Newsletters.
15. Delivered many invited talks and chaired sessions in national and international conferences.

PARTIAL LIST OF PUBLICATION (Refereed International Journals)

- 1 Poonam Pahuja, **R. P. Tandon**, Structural and dielectric properties of Multiferroic Composite System $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{TiO}_3\text{-Ni}_{0.4}\text{Co}_{0.2}\text{Zn}_{0.4}\text{Fe}_2\text{O}_4$, *Ferroelectrics* 516, 1-5 (2017).
- 2 Poonam Pahuja, Amit Tomar, **R. P. Tandon**, Modification in properties of Barium Titanate on Sm^{3+} Substitution, *Ferroelectrics* 516, 1-4 (2017).
- 3 Poonam Pahuja, Amit Tomar, **R. P. Tandon**, Improved properties in Dy^{3+} substituted Barium Titanate, *Integrated Ferroelectrics* 184, 1-4 (2017).
- 4 Poonam Pahuja, N. C. Mehra, **R. P. Tandon**, Micro-structural, ferroelectric and magnetic properties of Multiferroic Composite System $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{TiO}_3\text{-Ni}_{0.4}\text{Co}_{0.2}\text{Zn}_{0.4}\text{Fe}_2\text{O}_4$, *Ferroelectrics*, DOI 10.1080/00150193.2017.1362300.
- 5 Arti Gupta, Shankar Dutta, **R. P. Tandon** Growth and magnetic properties of $\text{Co}_{0.6}\text{Zn}_{0.4}\text{Fe}_{1.7}\text{Mn}_{0.3}\text{O}_4$ thin films on silicon, *Journal of Magnetism and Magnetic Materials*, 444 (2017), 23-28.
- 6 Arti Gupta, **Ram Pal Tandon**, Organic-inorganic hybrid polyvinylidene fluoride- $\text{Co}_{0.6}\text{Zn}_{0.4}\text{Mn}_{0.3}\text{Fe}_{1.7}\text{O}_4$ nanocomposite film with significant optical and magnetodielectric properties, *RSC Adv.*, 5 (2015) 10110-10118.
- 7 Sheetal Dewan, Monika Tomar, Anshu Goyal, A. K. Kapoor, **R. P. Tandon** and Vinay Gupta, Study of energy band discontinuity in NiZnO/ZnO heterostructure using X-ray photoelectron spectroscopy, *Applied Physics Letters*, 108 (2016) 211603.
- 8 Deepak Kumar, Poornendu Chaturvedi, Praveen Saho, Abhilasha Chouksey, Pika Jha, J. S. B. S. Rawat, **R. P. Tandon** and P K Chaudhury. Effect of Single Wall Carbon Nano tube networks on gas sensor response and detection limit. (Communicated) *Sensors and Actuators B: Chemical*
- 9 Deepak Kumar, Poornendu Chaturvedi, Abhilasha Chouksey, Pika Jha , J. S. B. S. Rawat , **R. P. Tandon**, P. K. Chaudhury, Highly sensitive NO_2 detection and DMMP sensing at room temperature using flexible SWNT thick film sensor. Under review, *Defence Science Journal*.
- 10 Rajveer Singh, Vandna Luthra, and **R. P. Tandon**; Microwave assisted sintering of Sr-deficient and Bi-rich strontium bismuth niobate ceramics, *Physica B* (2016) Communicated.
- 11 Virender Kumar Sachdev, Surender Kumar Sharma, Monica Tomar, Vinay Gupta and **Ram Pal Tandon**, EMI Shielding of MWCNT/ABS nanocomposites in contrast to Graphite/ABS composites and MWCNT/PS nanocomposites, *RSC Advance*, Accepted Manuscript
- 12 Arti Gupta, Shankar Dutta, **Ram Pal Tandon**, Magnetic and magneto-optical characteristics of spin coated $\text{Co}_{0.6}\text{Zn}_{0.4}\text{Fe}_{1.7}\text{Mn}_{0.3}\text{O}_4$ thin films on Pt (111) coated Si substrate, *Materials Science and Engineering: B*, Volume 207, May 2016, Pages 1–6
- 13 Surender Kumar Sharma, **R.P. Tandon**, and V.K. Sachdev, Synergic effect of graphene and MWCNT fillers on electromagnetic shielding properties of graphene-MWCNT/ABS nanocomposites. (Accepted Manuscript, *RSC Advances*) 2015. 3.84
- 14 Deepak Kumar, Poornendu Chaturvedi, Abhilasha Chouksey, **R. P. Tandon** and P K Chaudhury. Study of simultaneous reversible and irreversible adsorption on single-walled carbon nanotube gas sensor. *Materials Chemistry and Physics*, 2016, volume 177, page 276–282,
- 15 Deepak Kumar, Pika Jha, Abhilasha Chouksey, J. S. B. S. Rawat, **R. P. Tandon** and P. K. Chaudhury, 4-(Hexafluoro- 2-hydroxy isopropyl)aniline functionalized highly sensitive flexible SWCNT sensor for detection of nerve agent simulant dimethyl methylphosphonate; (Accepted) (*Materials Chemistry and Physics*)
- 16 Rajveer Singh, Vandna Luthra, Archana and **R. P. Tandon**; Investigation of Lattice Dynamics of Bi-Doped Strontium Bismuth Niobate Ferroelectric Ceramic, *J. Basic and Applied Engineering Research*, vol. 2 no.22 (2015), 1936-1940.
- 17 Arti Gupta, **R. P. Tandon**, A. B. Shinde, P. S. R. Krishna, and Ratnamala Chatterjee, Negative spontaneous magnetization and semi-spin glass magnetic order in mixed spinel $\text{Co}_{0.6}\text{Zn}_{0.4}\text{Fe}_{1.7}\text{Mn}_{0.3}\text{O}_4$, *JOURNAL OF APPLIED PHYSICS* 118(26):133902-28, 2015. 2.183
- 18 Swati Arora, Vinamrita Singh, Manoj Arora, **Ram Pal Tandon**, Improving P3HT:PCBM Based Polymer Solar Cell: Role of Doped PEDOT:PSS Hole Extracting Layer Towards Degradation, *Photovoltaic Specialist Conference (PVSC)*, 2014 IEEE 40th, pg. 2557-2560.
- 19 Deepak Kumar, Poornendu Chaturvedi, Abhilasha Chouksey, **R. P. Tandon** and Partap K Chaudhury, Investigation of Single wall nanotube gas sensor recovery behavior in the presence of UV:

- 2016, volume 7, issue 4, page 262-266
- 20 Raj Kumar Gupta, Richa Sharma, Ajit K. Mahapatro, **R.P. Tandon**, The effect of ZrO₂ dispersion on the thermoelectric power factor of Ca₃Co₄O₉ Physica B: Condensed Matter: Volume 483, 15 February 2016, Pages 48–53. 1.319
 - 21 Vishal Sharma, Vinamrita Singh, Manoj Arora, Swati Arora, and **R. P. Tandon**, Degradation analysis of PCDTBT:PC71BM organic solar cells- an insight, Current Applied Physics, Accepted Manuscript. 2.212
 - 22 V. K. Sachdev, Surender Kumar Sharma, S. Bhattacharya, K. Patel, N. C. Mehra, **R. P. Tandon**, Electromagnetic Shielding Performance of Graphite in Cement Matrix for Applied Application, Advanced Materials Letters, 6: 965-972 (2015). 1.96
 - 23 Vishal Sharma, Vinamrita Singh, Manoj Arora, Swati Arora, and **R.P. Tandon**, Bulk-heterojunction solar cells with different active layer blends: comparison of experimental and theoretical results, Advanced Materials Letters, Accepted Manuscript. 1.96
 - 24 Vishal Sharma, Vinamrita Singh, Manoj Arora, Swati Arora, and R.P. Tandon, Influence of donor-acceptor materials on the photovoltaic parameters of conjugated polymer/fullerene solar cells, Journal of Materials Science: Materials in Electronics, 26:6212–6217 (2015). 1.486
 - 25 Poonam Pahuja and R. P. Tandon, Microstructural, dielectric and magnetic properties of multiferroic composite system barium strontium titanate – nickel cobalt ferrite, AIP Conference Proceedings 1661, 060004 (2015).
 - 26 Richa Sharma and R. P. Tandon, Study of microstructure, dielectric and ferromagnetic properties of the (1-x) Ba_{0.95}Sr_{0.05}TiO₃ - (x) CoFe_{1.8}Mn_{0.2}O₄ multiferroic composites, AIP Conference Proceedings 1661 (2015) 060008.
 - 27 Richa Sharma, Vinamrita Singh, R. K. Kotnala, R. P. Tandon, Investigation on the effect of ferrite content on the multiferroic properties of (1-x) Ba_{0.95}Sr_{0.05}TiO₃ – (x) Ni_{0.7}Zn_{0.2}Co_{0.1}Fe₂O₄ ceramic composite, Materials Chemistry and Physics 160, 447-455 (2015). 2.129
 - 28 Richa Sharma and R. P. Tandon, Study of microstructure, dielectric and magnetoelectric properties of the lead free co-fired BaTiO₃–CoZn_{0.2}Fe_{1.8}O₄–BaTiO₃ trilayer composites, Journal of Materials Science: Materials in Electronics, 26 5287-5294 (2015). 1.486
 - 29 Arti Gupta, R. P. Tandon, Organic–inorganic hybrid polyvinylidene fluoride–Co_{0.6}Zn_{0.4}Mn_{0.3}Fe_{1.7}O₄ nanocomposite film with significant optical and magnetodielectric properties, RSC Advance 5, 10110 (2015). 3.84
 - 30 Rajveer Singh, Vandna Luthra, R. S. Rawat, R. P. Tandon, Structural, dielectric and piezoelectric properties of SrBi₂Nb₂O₉ and Sr_{0.8}Bi_{2.2}Nb₂O₉ ceramics, Ceramic International 41 (3), 4468-4478 (2014). 2.605
 - 31 Poonam Pahuja, Richa Sharma, Vinamrita Singh, Ram Pal Tandon, Novel method of synthesis of multiferroic Nickel Cobalt Ferrite – Barium Strontium Titanate composite system, International Journal of Applied Ceramic Technology 12, E156–E163 (2014). 1.32
 - 32 Arti Gupta, R. P. Tandon, Synthesis and Characterization of Co_{0.6}Zn_{0.4}Mn_{0.3}Fe_{1.7}O₄ Magnetic Nanoparticles, [Mater. Res. Soc. Symp. Proc. 1708](#), (2014). 1.25
 - 33 Arti Gupta, R. P. Tandon, Dielectric, magnetic and magnetoelectric studies on co-fired PbZr_{0.52}Ti_{0.48}O₃–Co_{0.6}Zn_{0.4}Mn_{0.3}Fe_{1.7}O₄ bilayer composite, [Materials Research Bulletin 61, 231–237](#) (2014). 1.90
 - 34 Surender Kumar Sharma, Ram P Tandon and V. K. Sachdev, Pre-localized MWCNT network for low percolation threshold in MWCNT/ABS nanocomposites: experiment and theory, [RSC Adv.](#) 4, 60733-60740 (2014). 3.84
 - 35 Vinamrita Singh, Swati Arora, Manoj Arora, Vishal Sharma, and R. P. Tandon, Optimizing P3HT/PCBM/MWCNT films for increased stability in polymer bulk heterojunction solar cells, Physics Letters A 378, 3046 (2014).
 - 36 Prikshit Gautam, Sushil K. Singh, R. P. Tandon, Dielectric Functions and Energy Band Gap Variation Studies of Manganese doped Bi_{3.25}La_{0.75}Ti₃O₁₂ Thin Films using Spectroscopic Ellipsometry, Journal of Alloys and Compounds 617, 374 (2014).
 - 37 Poonam Pahuja, R. K. Kotnala, R. P. Tandon, Effect of rare earth substitution on properties of barium strontium titanate ceramic and its multiferroic composite with nickel cobalt ferrite, Journal of Alloys and Compounds 617,140 (2014).
 - 38 Arti Gupta, R. P. Tandon, Dielectric and magnetoelectric properties of co-fired PbZr_{0.52}Ti_{0.48}O₃–Co_{0.6}Zn_{0.4}Mn_{0.3}Fe_{1.7}O–PbZr_{0.52}Ti_{0.48}O₃ trilayer composites, Journal of Material Science: Mater Electron 9, 4074 (2014).

- 39 N. Sharma, P. Aghamkar, S. Kumar, M. Bansal, Anju, R.P. Tandon, Study of structural and magnetic properties of Nd doped zinc ferrites *Journal of Magnetism and Magnetic Materials* 369, 162–167 (2014).
- 40 Rakesh K. Mishra, Raman Kashyap, A. G. Vedeshwar and R. P. Tandon, Structural and optical properties of Sb₂S₃ nanocrystals in glass, [AIP Conf. Proc. 1591, 327 \(2014\)](#).
- 41 Prikshit Gautam, Sushil K. Singh, R. P. Tandon, Mechanism for leakage current conduction in manganese doped Bi_{3.25}La_{0.75}Ti₃O₁₂ (BLT) ferroelectric thin films, *Journal of Alloys and Compounds* 606, 132–138 (2014).
- 42 Vinamrita Singh, Swati Arora, Manoj Arora, Vishal Sharma, and R.P. Tandon, Characterization of doped PEDOT:PSS and its influence on the performance and degradation of organic solar cell, *Semiconductor Science and Technology* 29, 1 (2014).
- 43 Richa Sharma, Poonam Pahuja, R. P. Tandon, Structural, dielectric, ferromagnetic, ferroelectric and ac conductivity studies of the BaTiO₃–CoFe_{1.8}Zn_{0.2}O₄ multiferroic particulate composites, *Ceramics International* 40, 9027 (2014).
- 44 Rakesh K Mishra, A G Vedeshwar, and R P Tandon, Optical absorption, photoluminescence and structural analysis of CdS quantum dots in weak confinement, *Physica Scripta* 89, 025701 (2014).
- 45 Virendra Kumar Sachdev, Sudeshna Bhattacharya, Kamlesh Patel, Surender Kumar Sharma, Navin Chand Mehra, Ram Pal Tandon, Electrical and EMI shielding characterization of multiwalled carbon nanotube/polystyrene composites. *J. Appl. Polym. Sci.* 131, 40201 (1-9) (2014).
- 46 Vikash Singh, Subhash Sharma, R. K. Dwivedi, Manoj Kumar, R. K. Kotnala, N.C. Mehra, R. P. Tandon, Structural, Dielectric, Ferroelectric and Magnetic Properties of Bi_{0.80}A_{0.20}FeO₃ (A = Pr, Y) Multiferroics. *Journal of Superconductivity and Novel Magnetism* 26, 657–661 (2013).
- 47 Poonam Pahuja, Chandra Prakash, R. P. Tandon, Comparative study of magnetoelectric composite system Ba_{0.95}Sr_{0.05}TiO₃ – Ni_{0.8}Co_{0.2}Fe₂O₄ with ferrite prepared by different methods, *Ceramics International* 40(4), 5731 (2014).
- 48 Anuj Kumar, R. P. Tandon and V. P. S. Awana, Spin dynamics, short-range order and superparamagnetism in superconducting ferromagnet RuSr₂Gd_{1.4}Ce_{0.6}Cu₂O_{10-δ}, *Journal of Magnetism and Magnetic Materials* 349, 224–231 (2014).
- 49 Rakesh K Mishra, A. G. Vedeshwar, R. P. Tandon, Sb₂S₃ quantum dots: diffusion-controlled growth and characterization, *Physica Status Solidi (RRL) - Rapid Research Letters* 11, 975 (2013).
- 50 Monika Shahi, Seema Gautam, Preeti V. Shah, P Jha, P Kumar, J. Rawat, P K Chaudhury, Dr. Harsh, and Ram Pal Tandon, Effect of purity, edge length and growth area on field emission of multi-walled carbon nanotube emitter arrays, *Journal of Applied Physics*, 113, 204 (2013).
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