

Curriculum Vitae

Dr. Rahul Tripathi

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Research

➤ **Area of interest:** Material Science and Computational Physics

➤ **Research Project:**

1. **UGC-Major Research Project (Rs. 11.55 Lakhs), completed 2018**
2. **Minor research project funded by Ch. Bansi Lal University (Rs. 1 Lakhs), completed 2023**

Research Papers

1. **Rahul Tripathi**, V.P.S. Awana, M.A. Ansari, Prem Vir Singh, R.K. Kotnala, Ram Kishore, G.L. Bhalla, H. Kishan "Search for above room temperature high temperature coefficient of resistance (TCR) in manganites" **Indian Journal of cryogenics** **31(2006)**
2. Prem Vir Singh, **Rahul Tripathi**, Ravi Kant, Vijay Kumar, H.K. Singh, A.K. Gupta, V.P.S. Awana and Hari Kishan "Effect of Pr doping on transport properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ CMR material " **Indian Journal of cryogenics** **32, 1-4 (2007)**
3. V. P. S. Awana, **Rahul Tripathi**, S. Balamurugan, H. Kishan, and E. Takayama-Muromachi "Magneto Transport of high TCR(Temperature Coefficient of Resistance) $\text{La}_{2/3}\text{Ca}_{1/3}\text{MnO}_3$: Ag Polycrystalline Composites" **Solid State Communications** **140, 9-10, 410-415 (2006)**, DOI: [10.1016/j.ssc.2006.09.021](https://doi.org/10.1016/j.ssc.2006.09.021) ; ISSN: 0038-1098; Impact Factor: 1.554
4. **Rahul Tripathi**, V.P.S. Awana, S. Balamurugan, R.K. Kotnala, RamKishore, H. Kishan and E. Takayama-Muromachi "Inter comparison of the magneto transport of $\text{La}_{2/3}\text{Ca}_{1/3}\text{MnO}_3$: Ag/In polycrystalline composites " **IEEE Transcations on Magnetism** **Vol. 43, No. 6, 3055-3057 (2007)**, DOI: [10.1109/TMAG.2007.893114](https://doi.org/10.1109/TMAG.2007.893114); ISSN : 0018-9464; Impact Factor:1.243
5. V.P.S. Awana, **Rahul Tripathi**, V.K. Sharma, H. Kishan, E. Takayama-Muromachi and I. Felner "Impact of rare earth magnetic moment on ordering of Ru in $\text{RESr}_2\text{RuO}_6$ (RE = Gd and Eu)" **J. Magnetism and Magnetic Materials** **312, 2, 290-293 (2007)**, DOI: [10.1016/j.jmmm.2006.10.409](https://doi.org/10.1016/j.jmmm.2006.10.409) ; ISSN: 0304-8853; Impact Factor 2.63
6. **Rahul Tripathi**, V.P.S. Awana, G. L. Bhalla, S. Balamurugan and H. Kishan "Impact of silver addition on room temperature magneto-resistance in $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$ (LBMO): Ag_x (x = 0.0, 0.1, 0.2, 0.3, 0.4)" **J. Superconductivity and novel magnetism** **21, 2, 151-159 (2008)**, DOI: [10.1007/s10948-008-0310-7](https://doi.org/10.1007/s10948-008-0310-7); ISSN: 1557-1939; Impact Factor:1.18
7. V.P.S. Awana, Arpita Vajpayee, Monika Mudgel, Anuj Kumar, R.S. Meena, **Rahul Tripathi**, Shiva Kumar, R.K. Kotnala and H. Kishan "One step atmospheric pressure synthesis of the ground state of LaAsFeO " **J. Sup. & Novel Magnetism** **21, 3, 167-169 (2008)**, DOI: [10.1007/s10948-008-0320-5](https://doi.org/10.1007/s10948-008-0320-5); ISSN: 1557-1939; Impact Factor:1.18

8. **Rahul Tripathi**, V.P.S. Awana, G. L. Bhalla, and H. Kishan "Search for room temperature high TCR manganite/silver composites" **J. Magnetism & Magnetic Materials** **320**, **10**, L89-L92(2008), DOI: [10.1016/j.jmmm.2008.01.039](https://doi.org/10.1016/j.jmmm.2008.01.039); ISSN: 0304-8853; Impact Factor: 2.63
9. **Rahul Tripathi**, Anjana Dogra, A. K. Srivastava, V. P. S. Awana, R.K. Kotnala, G.L. Bhalla and H. Kishan " Influence of Sintering Temperature and Oxygen Annealing on Transport Properties of $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ " **J. Phys. D: Appl. Phys.** **42**, No.2, 025003-025009 (2009), DOI: [10.1088/0022-3727/42/2/025003](https://doi.org/10.1088/0022-3727/42/2/025003); ISSN: 0022-3727; Impact Factor:2.588
10. V. P. S. Awana, **Rahul Tripathi**, S. Balamurugan, Anuj Kumar, Anjana Dogra and H. Kishan " Large thermal hysteresis in electrical transport of charge ordered $\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$ manganites" **J. Alloys & Compounds** **475**, 1-2, L13-L16 (2009), DOI: [10.1016/j.jallcom.2008.07.077](https://doi.org/10.1016/j.jallcom.2008.07.077); ISSN:0925-8388; Impact Factor: 3.133
11. **Rahul Tripathi**, V. P. S. Awana, S.K. Aggrawal, Neeraj Panwar, G.L. Bhalla, H.U. Habermier and H. Kishan " Enhanced room temperature coefficient of resistance and magnetoresistance of Ag-added $\text{La}_{0.7}\text{Ca}_{0.3-x}\text{Ba}_x\text{MnO}_3$ composites" **J. Phys. D: Appl. Phys** **42**, **17**, 175002 (7pp) (2009), DOI: [10.1088/0022-3727/42/17/175002](https://doi.org/10.1088/0022-3727/42/17/175002); ISSN: ISSN: 0022-3727; Impact Factor:2.588
12. Neeraj Kumar, **Rahul Tripathi**, Anjana Dogra, V. P. S. Awana, and H. Kishan " Effect of Pr doping in LaSnMnO system " **J. Alloys and Compounds** **492**, 1-2, L28-L32 (2010), DOI: [10.1016/j.jallcom.2009.11.100](https://doi.org/10.1016/j.jallcom.2009.11.100); ISSN:0925-8388; Impact Factor: 3.133
13. V. P. S. Awana, **Rahul Tripathi**, Neeraj Kumar, H. Kishan, G.L. Bhalla, R. Zeng, L.S. Sharth Chandra, V. Ganesan, and H.U. Habermier "Magnetotransport of $\text{La}_{0.7}\text{Ca}_{0.3-x}\text{Sr}_x\text{MnO}_3$ (Ag): "A potential room temperature bolometer and magnetic sensor" **J. Applied Physics** **107**, **9**, 09D723 (2010), DOI: [10.1063/1.3365412](https://doi.org/10.1063/1.3365412); ISSN: 0021-8979; Impact Factor: 2.068
14. Yener Kuru, Rahul Tripathi, V. P. S. Awana, H. Kishan and H.U. Habermier, "Room temperature magnetoresistance of $\text{La}_{0.7}\text{Ca}_{0.2}\text{Ba}_{0.1}\text{MnO}_3/\text{Ag}$ thin films" **Physica Status Solidi-A**, **207**, **9**, 1485-88 (2010), DOI: [10.1002/pssa.200925570](https://doi.org/10.1002/pssa.200925570); ISSN: 1862-6300; Impact Factor:1.775
15. Vivek Verma, Anu Beniwal, Anil Ohlan and Rahul Tripathi, "Structural, magnetic and ferroelectric properties of Pr doped multiferroics bismuth ferrites" **J. Magnetism & Magnetic Materials** **394**, 385-390 (2015), DOI: [10.1016/j.jmmm.2015.06.067](https://doi.org/10.1016/j.jmmm.2015.06.067); ISSN: 0304-8853; Impact Factor: 2.993
16. Sushma Lather, Anjali Gupta, Jasvir Dalal, Vivek Verma, Rahul Tripathi and Anil Ohlan, "Effect of mechanical milling on Structural, Dielectric and Magnetic properties of $\text{BaTiO}_3\text{-Ni}_{0.5}\text{Co}_{0.5}\text{Fe}_2\text{O}_4$ multiferroic nanocomposites", **Ceramic international**, **43**, **3**, 3246-3251(2017). DOI: <https://doi.org/10.1016/j.ceramint.2016.11.152>; ISSN: 0272-8842, Impact Factor: 4.527
17. Akash Yadav, Jyoti Shah, Rahul Tripathi, R.K. Kotnala, "Room Temperature Metal-Insulator Transition Observed in Pb Substituted Lanthanum Manganite, **Ceramic international**, **43**, **13**, 10508-10514 (2017), DOI: <http://dx.doi.org/10.1016/j.ceramint.2017.05.099>, ISSN: 0272-8842, Impact Factor: 4.527
18. Sushma Lather, Jasvir Dalal, Anjali Gupta, Sukhbir Singh. D.P.Singh, Sajjan Dahiya, A.S.Maun, Rahul Tripathi and Anil Ohlan, "PbTiO₃-Ni_{0.5}Co_{0.5}Fe₂O₄ multiferroic

nanocomposites: Impact of ball-milling on dielectric, magnetic and ferroelectric properties, **Ceramics International**, **45**, **4**, **4957-4963** (2019), DOI: <https://doi.org/10.1016/j.ceramint.2018.11.195>, ISSN: 0272-8842, Impact Factor: 4.527

19. J Dalal, S Lather, A Gupta, R Tripathi, AS Maan, K Singh, A Ohlan, “Reduced Graphene Oxide Functionalized Strontium Ferrite in Poly (3, 4-ethylenedioxythiophene) Conducting Network: A High-Performance EMI Shielding Material”, **Advanced Materials Technologies**, **4**, **7**, **1900023** (2019), DOI: <https://doi.org/10.1002/admt.201900023>, ISSN: 2365-709X (online), Impact Factor: 7.848
20. Anjali Gupta, Silki Sardana, Jasvir Dalal, Sushma Lather, Anup S. Maan, Rahul Tripathi, Rajesh Punia, Kuldeep Singh, and Anil Ohlan, “Nanostructured Polyaniline/Graphene/Fe₂O₃ Composites Hydrogel as a High-Performance Flexible Supercapacitor Electrode Material, *ACS Appl. Energy Mater.* 2020, 3, 7, 6434–6446, June 2020, DOI: <https://doi.org/10.1021/acsaem.0c00684>, web edition ISSN: 2574-0962, Impact Factor: 6.024
21. Sushma Lather, Sukhbir Singh, Sajjan Dahiya, A.S. Maan, Rahul Singhal, Rahul Tripathi and Anil Ohlan “Effect of mechanical milling on magnetic, dielectric and magneto-electric properties of Z- type (Ba, Sr) hexaferrites”, **Journal of Alloys and Compounds**, **905**, **163807** (2022), DOI: <https://doi.org/10.1016/j.jallcom.2022.163807>; ISSN: 0925-8388; Impact Factor: 5.316
22. Pardeep Khichi, **Rahul Tripathi**, Anil Ohlan, “Optimization of synthesis parameters for Molybdenum Diselenide (MoSe₂) using Hydrothermal Method”, *Wiley Energy Storage*, e399 (2022), DOI: <https://doi.org/10.1002/est2.399>; Online ISSN: 2578-4862; Impact factor: 3.2
23. A Gupta, S Sardana, S Dahiya, R Punia, AS Maan, K Singh, **R Tripathi** and Anil Ohlan, “Binder-free polypyrrole/fluorinated graphene nanocomposite hydrogel as a novel electrode material for highly efficient supercapacitors”, *Applied Surface Science Advances* 11, 100297 (2022), DOI: <https://doi.org/10.1016/j.apsadv.2022.100297>; Online ISSN: 2666-5239; Impact factor: 6.2
24. S Singh, P Khichi, S Dahiya, R Punia, AS Maan, R Tripathi, A Ohlan, A systematic study of physical properties of La substituted Sr₃Co₂Fe₂₄O₄₁ Z-hexaferrites, *Ceramics International* 49 (3), 4599-4606 (2023), DOI: <https://doi.org/10.1016/j.ceramint.2022.09.345>; ISSN: 0272-8842, Impact Factor: 5.2
25. Sukhbir Singh, Pardeep Khichi, Sajjan Dahiya, Rajesh Punia, PK Saini, Srinibas Stapathy, Rahul Tripathi, Anil Ohlan, Enhanced magnetoelectric coupling in novel rare earth metal substituted Sr based Z-hexaferrites/P (VDF-HFP) composites, *Ceramic International*, 49, Issue 15, 26135-26140 (2023), DOI: <https://doi.org/10.1016/j.ceramint.2023.05.063>; ISSN: 0272-8842, Impact Factor: 5.2
26. Sukhbir Singh, Sajjan Dahiya, Rajesh Punia, A.S. Maan, P.K. Saini, S. Satapathy, **Rahul Tripathi** and Anil Ohlan, Investigation of the Structural, Dielectric, Magnetic, and Magnetoelectric Properties of Nd-Substituted Sr₃Co₂Fe₂₄O₄₁ Z-Hexaferrite, *ECS Journal*

27. Pardeep Khichi, Priya Siwach, Latisha Gaba, Vijay Kumar, Jagdish Kumar, Anil Ohlan, Rahul Tripathi, Investigating and optimizing the variation of selenium infused MoS₂ as electrode material for supercapacitor applications, FlatChem **46**, 100688 (2024), DOI: <https://doi.org/10.1016/j.flatc.2024.100688>; ISSN: 2452-2627 (Online), Impact Factor 5.9.
28. Ritu Chahal, Rashika Rathee, Sajjan Dahiya, Rajesh Punia, AS Maan, Kuldeep Singh, **Rahul Tripathi**, M Aslam Manthrammel, Mohd Shkir, Anil Ohlan, Mesoporous Ni_{0.5}Cu_{0.5}Co₂O₄@ Co₃O₄ nanostructures: Template-assisted synthesis and RGO hybridization for high-performance electromagnetic shielding, Chemical Engineering Journal, 520 , 15 165715 (2025), DOI: <https://doi.org/10.1016/j.cej.2025.165715>; ISSN: 1385-8947 (offline)/1873-3212(Online), Impact Factor: 13.2

Book and Book Chapter

Sukhbir Singh, Sajjan Dahiya, Anil Ohlan and **Rahul Tripathi**, “Magnetic and Ferroelectric Properties of Sr-based Z Hexaferrites with La Substitution: Towards Multiferroic Material for Futuristic Technologies”, NANO MATERIAL SYNTHESIS AND APPLICATIONS, Cambridge Scholars Publishing, 2024, ISBN (Ebook): 978-1-1717-8 ISBN: 978-1-0364-1717-8

Conferences/Seminars/workshops

1. **Magneto Transport of La_{2/3}Ca_{1/3}MnO₃: Ag Polycrystalline Composites**
Rahul Tripathi, V.P.S. Awana and H. Kishan, Presented in Recent Advances in Material Sciences (RAMS), Kurukshetra-2006.
2. **Search for high TCR (Temperature Coefficient of resistance) and FCR (Field coefficient of resistance) in technically important manganites**
Rahul Tripathi, V.P.S. Awana, R.K. Kotnala, Ram Kishore, H. Kishan and G.L. Bhalla, Presented in conference of Material Research Society of India (MRSI), New Delhi-2007.
3. **Structural and transport studies of La_{0.67}Ca_{0.33}MnO₃ by varying sintering temperature and oxygen annealing**
Rahul Tripathi, V.P.S. Awana , Anjana Dogra, Neeraj Kumar, H. Kishan and G.L. Bhalla, Presented in 53rd DAE Symposium, BARC-Mumbai-2008.
4. **Manganites: A possible approach to room temperature bolometer/infrared sensor**
Rahul Tripathi, V.P.S. Awana, H. Kishan and G.L. Bhalla, Presented in International Conference on Advanced Functional Materials (ICAFM), Trivendrum-2009.
5. **Study of TCR/MR responses of La_{0.7}Ca_{0.2}Ba_{0.1}MnO₃+Ag and La_{0.7}Ca_{0.2}Sr_{0.1}MnO₃+Ag compounds: A promising candidate for infrared/magnetic sensing devices.**
Rahul Tripathi, V.P.S. Awana, H. Kishan and G.L. Bhalla, Presented at International Conference on Quantum Effects in Solids of Today (I-CONQUEST), New Delhi- 2010

6. **Impact of improved grain morphology with silver addition on electrical and magneto-transport properties of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ (A= Ca & Ba) and $\text{La}_{0.7}\text{Ca}_{0.2}(\text{Ba/Sr})_{0.1}\text{MnO}_3$.**

Rahul Tripathi, H. Kishan and G.L. Bhalla, Presented at Experimental and Computational Techniques in Material Sciences (ECTMS), Shimla-2012

7. **Z-type Co-Hexaferrites: an analysis of synthesis parameter**

Rahul Tripathi, Sukhbir Singh, Sushma Lather, Jasvir Dalal and Anil Ohlan , Presented at National Seminar on Recent trends in Science and Technology A Computational Approach (RTSTCA-2018), Ch. Bansi Lal University, Bhiwani. 28 March 2018.

8. **Effect of Hydrogen annealing on magneto-resistive $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$**

Rahul Tripathi, H. Kishan Presented at Science for Society & Sustainability in the Light of NEP – 2020 (SSSNEP – 2023), Aggrawal College Ballabgarh, March 21-22, 2023

1. TEQIP workshop titled 'Mechanics in Physics', **23-27 June 2014 at IIT Kanpur.**
2. TEQIP Hands on Training cum Workshop on Electron Microscopy-Why, How and What', **19-23 Oct. 2015 at IIT Roorkee.**

• **Invited speaker/resource person/Keynote speaker**

1. Resource person in 7 day workshop on material characterization techniques organized by Dept of Physics, M.D. University, Rohtak from 22-28 Sept 2022.
2. Resource person in Winter School 2021 on Understanding Crystal Structure by X-Ray Diffraction Organized by Department of Physics and Electronics, Hansraj College, University of Delhi from 31st December 2021 – 8th January 2022.
3. Keynote Speaker in One Day Online Workshop organized by Adarsh Mahila Mahavidyalaya, Bhiwani on 29 Jan 2022.
4. Extension Lecture on the topic Statistical Mechanics at BLJS College, Tosham on 06.04.24.
5. Invited speaker/Expert lecture in a Faculty Development Program on "Spectroscopic Techniques for Materials Characterization" organized by the *Department of Physics, University Institute of Sciences, Chandigarh University, Punjab, INDIA* from 9th to 13th December, 2024.