

CURRICULUM VITAE



Name: *Dr. Bharat Singh*

Designation: *Assistant Professor, Department of Physics, Government Degree College Ramban (J&K).*

Qualification: *M.Sc., M.Phil., Ph.D.*

Area of Interest: *Condensed Matter Physics/Materials Science.*

Collaborations: *Czech Republic, France CRISMAT Lab, B.A.R.C Mumbai, IUAC Indore and TJCM, Govt. Degree College Sujanpur Tihra (H. P) and BHU Varanasi (U.P).*

Teaching Experience: *03 Years*

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Achievements/Awards

- ✓ International Conference / Workshop attended at **Grenoble, France** on “**Single Crystal Diffraction with Polarized Neutrons, 2013**”
- ✓ Workshop (School) attended at **Grenoble, France** on “**5th ILL Annual School on Advance Neutron Diffraction Data Treatment using the FullProf Suite, 2012**”
- ✓ Awarded Senior Research Fellowship (**SRF**) **UGC-SAP** entitled “**UGC Research Fellowships in Sciences for Meritorious Students**” in the year 2012.
- ✓ Awarded Junior Research Fellowship (**JRF**) **UGC-SAP** entitled “**UGC Research Fellowships in Sciences for Meritorious Students**” in the year 2010.
- ✓ Awarded **UGC Fellowship** in the year 2009.
- ✓ Secured **Third Position** in University in Master of Philosophy (M. Phil) Physics Examination.

- ✓ Awarded National Cadet Corps (N.C.C) “C” Certificate.

Research Experience

- ✓ Six years Research experience in Synthesis and Characterization of oxide materials using solid state reaction method.
- ✓ Characterization techniques used X-ray diffraction for identifying the phase formation, low temperature resistivity measurement using closed cycle cryostat, Dielectric measurements as a function of temperature and frequency. Magnetic and Thermoelectric properties of various oxide materials.
- ✓ One year M. Phil dissertation entitled “**Thermal Hysteresis Study of Sr doped Manganites.**”
- ✓ Six month project on “**Study of XRD indexing**” during M.Sc.

Paper Presented/Proceedings/workshops

- 1) Workshop attended at **Grenoble, France** on “**5th ILL Annual School on Advanced Neutron Diffraction Data Treatment using the FullProf suite.**”
- 2) **Structural and Transport Properties of Yb substituted YBaCo₄O₇.** **Bharat Singh**, Naresh Kumar, S. Rayaprol and N. K. Gaur, presented in “International Workshop on single-Crystal Diffraction with Polarized Neutrons” which was held at **ILL, Grenoble, France.**
- 3) Attended **5th Refresher Course** work in Experimental Physics from September 16-30, 2013 in Department of Physics, Barkatullah University, Bhopal.
- 4) **Structural and Transport Properties of A_{0.67}Sr_{0.33}MnO₃, (A = Pr, Nd) Manganites.**

- Bharat Singh**, Naresh Kumar, Masroor Ahmad Bhat, Rajneesh Mohan and N.K. Gaur (presented in AMPSE-2014, conference which was held at LNCT, Bhopal).
- 5) Effect of Sintering Temperature on the Microstructural and Temperature coefficient of Resistance in $\text{Pr}_{0.67}\text{Sr}_{0.33-x}\text{Ag}_x\text{MnO}_3$ ($0 \leq x \leq 0.10$) System.**
- Masroor Ahmad Bhat, Renu Choithrani, **Bharat Singh**, N. K. Gaur (presented in AMPSE-2014, which was held at LNCT, Bhopal).
- 6) Study on Double Peak Behavior of Resistivity –Temperatures curves in Sr Doped Manganites.**
- Bharat Singh**, Naresh Kumar, Rajneesh Mohan, S. Bhattacharya and N. K. Gaur, presented in ISSMD-2013, conference which was held at Jammu University.
- 7) Study on Thermal Hysteresis of Sr doped Manganites.**
- Bharat Singh**, Naresh Kumar, Rajneesh Mohan, S. Bhattacharya and N. K. Gaur presented in Conference on “Recent Trends in Applied Physics and Materials Science” which was held at **Bikaner (Rajasthan)**.
- 8) Structural and Transport Properties of Dy Substituted YBaCo_4O_7**
- Bharat Singh**, Naresh Kumar, S. Rayaprol and N. K. Gaur, presented in DAE-SSPS 2012 symposium which was held at IIT-Mumbai.
- 9) Structural and Transport Properties of Yb Substituted YBaCo_4O_7**
- Bharat Singh**, Naresh Kumar, N. K. Gaur and S. Rayaprol, presented in DAE-SSPS 2011 symposium which was held at SRM University Chennai.
- 10) Structural and Electrical Properties of Ag doped $\text{Pr}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$**
- Masroor Ahmad Bhat, Aga Shahee, Rajesh K. Thakur, **Bharat Singh**, Naresh Kumar and N. K. Gaur, presented in International

conference on Material processing and characterization which was held at Hyderabad, 2012.

11) Effect of HgO Addition on Resistivity Behaviour of $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$

Bharat Singh, Naresh Kumar, Masroor Ahmad Bhat, Rajneesh Mohan, Kiran Singh, and N. K. Gaur presented in DAE-SSPS 2010 symposium which was held at MIT-Manipal.

12) Thermoelectric Properties of $\text{Ca}_4\text{Mn}_3\text{O}_{10}$

S. Bhattacharya, **Bharat Singh**, S. Rayaprol, A. Singh, R. Basu, M. R. Gonal, N. K. Gaur, and S. K. Gupta presented in DAE-SSPS 2010 symposium which was held at MIT-Manipal.

13) Study of Structural and Electrical Properties of $\text{Nd}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ and $\text{Pr}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ Manganites

Bharat Singh, Naresh Kumar, Rajneesh Mohan, Masroor Ahmad Bhat, Kiran Singh and N. K. Gaur, presented in 39th National Seminar on Crystallography which held at University of Jammu from 25-27 Oct, 2010.

14) National workshop on X-Ray diffraction and its applications held at Saurashtra University, Rajkot (Gujarat) on 17-19, March 2010.

15) Synthesis and Characterization of $(\text{La}_{0.5}\text{Nd}_{0.5})_{0.67}\text{Ca}_{0.33}\text{MnO}_3$

Naresh Kumar, Rajneesh Mohan, **Bharat Singh**, Devendra Kumar Pandey and N.K. Gaur, presented in International Conference on Electroceramics which was held at University of Delhi from 13-17 December 2009.

16) Thermal Hysteresis Study of Sr Doped Manganites

Bharat Singh, Rajneesh Mohan, Naresh Kumar, Kiran Singh and N. K. Gaur, presented in National Conference on Recent Advances in Correlated Electron Systems from 18-20 January 2010 at IIT Guhawati.

17) Synthesis and Characterization of $\text{RuSr}_2\text{R}_{1.6}\text{Ce}_{0.4}\text{Cu}_2\text{O}_{10}$ (R = Gd, Eu and Sm) Magnetosuperconductors

Rajneesh Mohan, Bharat Singh, Naresh Kumar, Kiran Singh, S. Bhattacharya, N.K. Gaur, and R.K. Singh, presented in 5th NCPT from 07-09 October, 2009, M. S. University, Baroda, India.

18) Double Peak Behavior of Resistivity-Temperature Curves in $(\text{Nd/Pr})_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ Manganites

Naresh Kumar, Rajneesh Mohan, S. Bhattacharya, Bharat Singh, Kiran Singh, Jaypal Singh and N. K. Gaur, presented in International conference on Multifunctional Oxide Materials ICMOM from 16-18, April, 2009 to be held at Himachal Pradesh University Shimla, India).

19) Participated in conference of Department of Atomic Energy (DAE) at Barkatullah University, Bhopal-2006.

Papers In Journal

1) Synthesis and Characterization of $\text{A}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ (A= Pr and Nd) Manganites.

Bharat Singh, Naresh Kumar, Shammi Kumar, Masroor Ahmad Bhat, Rajneesh Mohan and N. K. Gaur, Invertis Journal of Science and technology. Vol. 8, No.4, 2015; pp. 1-5.

2) Double Peak Behavior of Resistivity-Temperature Curves in $(\text{Nd/Pr})_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ Manganites.

Bharat Singh, Naresh Kumar, Masroor Ahmad Bhat, Rajneesh Mohan, S. Bhattacharya and N. K. Gaur, J. Nano- Electronic Physics. **6** (2014) 02005-1- 02005-3.

3) Study on Thermal Hysteresis of Sr doped Manganites.

Bharat Singh, Naresh Kumar, Rajneesh Mohan, S. Bhattacharya and N. K. Gaur, Amer. Inst. Phys. **1536** (2013) 1063-1064.

- 4) **Structural and Transport Properties of Dy Substituted YBaCo_4O_7 .**
Bharat Singh, Naresh Kumar, S. Rayaprol and N. K. Gaur, Amer. Inst. Phys. **1512** (2013) 956-957.
- 5) **Structural and Transport Properties of Yb Substituted YBaCo_4O_7 .**
Bharat Singh, Naresh Kumar, N. K. Gaur and S. Rayaprol, Amer. Inst. Phys. **1447** (2012) 955-956.
- 6) **Effect of HgO Addition on Resistivity Behaviour of $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$.**
Bharat Singh, Naresh Kumar, Masroor Ahmad Bhat, Rajneesh Mohan, Kiran Singh, and N. K. Gaur, Amer. Inst. Phys. **1349** (2011) 1063-1064.
- 7) **Thermoelectric Properties of $\text{Ca}_4\text{Mn}_3\text{O}_{10}$.**
S. Bhattacharya, Bharat Singh, S. Rayaprol, A. Singh, R. Basu, M. R. Gonal, N. K. Gaur, and S. K. Gupta, Amer. Inst. Phys. **1349** (2011) 1011-1012.
- 8) **Magnetic and Dielectric Properties of R_2CuTiO_6 Compounds (R= Y, La, Pr and Nd).**
Kiran Singh, Naresh Kumar, Bharat Singh, Som Datta Kaushik, N. K. Gaur, Shovit Bhattacharya, Sudhindra Rayprol and Charles Simon, J. of Supercon and Nov Magn. **24** (2011) 1829-1838.
- 9) **Colossal Electroresistance in $\text{Sm}_{0.55}\text{Sr}_{0.45}\text{MnO}_3$.**
Rajneesh Mohan, Naresh Kumar, Bharat Singh, N.K. Gaur, Shovit Bhattacharya, S. Rayaprol, A. Dogra, S.K. Gupta, S.J. Kim and R.K. Singh, J. of Alloys and Comp. **508** (2010) L32-L35.

(Dr. Bharat Singh)