




CURRICULUM VITAE

Name:	Dr. NEELABH SRIVASTAVA	
Designation:	Assistant Professor	
School:	School of Physical Sciences	
Department:	Physics	
Specialisation & Research Interests:	<p>Experimental Condensed Matter Physics:</p> <p>Spintronics, Thin film Magnetism, Oxide nanostructures, Diluted Magnetic Semiconductors (DMSs), Surface & Interface Physics, Exchange coupled magnetic heterostructures, Swift Heavy Ion Induced modifications of materials, Study of low temperature electronic and magneto-transport behaviour across layered interfaces; Numerical simulation based study of photovoltaic devices</p>	
Email IDs (Official & Personal)	<p>neelabh@mgcub.ac.in ; neelabh.mdl@gmail.com</p> <p>http://scholar.google.co.in/citations?user=yvBhVi0AAAAI</p>	
Mobile No.:	+91-6392192675	
Address:	Department of Physics, School of Physical Sciences, Mahatma Gandhi Central University, Motihari-845401, Bihar	

2. ACADEMIC QUALIFICATION (in reverse Chronological order):

Degree	Year	University / Board
Ph.D.	2013	Banaras Hindu University, Varanasi (U.P.)
M.Sc.	2007	D.D.U. Gorakhpur University, Gorakhpur (U.P.)

Degree	Year	University / Board
B.Sc.	2005	D.D.U. Gorakhpur University, Gorakhpur (U.P.)
12 th	2002	U.P. Board, Allahabad
10 th	2000	U.P. Board, Allahabad

3. ANY OTHER QUALIFICATION:

None

4. PROFESSIONAL EXPERIENCE:

Organisation/Institute/University	Position Held	Duration
Mahatma Gandhi Central University, Bihar	Assistant Professor	03/10/2016 to till date
Saurashtra University, Rajkot	Dr. D.S. Kothari Postdoctoral Fellow	01/09/2016 to 30/09/2016
Institute of Semiconductor Optics and Functional Interfaces, University of Stuttgart, Germany	Postdoctoral Research Scientist	29/10/2013 to 29/02/2016

5. ADMINISTRATIVE ASSIGNMENTS:

Position Held	Duration	Nature of Work
Associate Controller of Examinations	01 st June 2023 to till date	Administrative
Associate Controller of Examinations	18 th October 2019 to 22 nd September 2022	Administrative

Assistant Director (Examinations)	July 2017 to January 2019	Administrative
Member	12 th May 2017 to 11 th May 2020	Board of Studies (BoS) of Department of Physics, Mahatma Gandhi Central University, Bihar
Member	31 st October 2017 to 30 th October 2020 (27 th August 2020)	School Board of School of Physical and Material Sciences, Mahatma Gandhi Central University, Bihar
Member	02 nd December 2020 to till date	Research Advisory Committee (RAC) of the Department of Physics
Member	14 th October 2019 to till date	Departmental Research Committee (DRC) of the Department of Physics

6. COURSES TAUGHT:

At UG level	At PG level	M.Phil./Ph.D. Course Work
1. Electricity and Magnetism (PHYS3003) 2. Analog Systems and Applications (PHYS3007) 3. Physics of Devices and Instruments (PHYS3017) 4. Statistical Mechanics (PHYS3014) 5. Nano Materials and Applications (PHYS3024) 6. GE-Electricity and Magnetism (PHYS3038) 7. GE-Optics and Optical Instruments (PHYS3054) 8. GE-Semiconductors and Their Applications (PHYS3055) 9. Basic Instrumentation Skills (PHYS3031) 10. GE-Optics and Modern Physics (PHYS3048)	1. Classical Mechanics (PHYS4002) 2. Thermal and Statistical Physics (PHYS4006)	1. Advanced Physical Tools and Techniques (PHYS5002)

7. RESEARCH SUPERVISION:

A. Ph.D.: 01

- i. **Awarded** : 00
- ii. **Submitted** : 00
- iii. **Ongoing** : 01

B. M.Phil.: 01

- i. **Awarded** : 01
- ii. **Submitted** : 00
- iii. **Ongoing** : 00

C. Non-Degree Oriented (Master's Level Dissertation): 07

- i. **Awarded** : 07
- ii. **Submitted** : 00
- iii. **Ongoing** : 00

8. ONGOING/COMPLETED RESEARCH PROJECTS:

Title of the Project	Funding Agency (Major/Minor/Role)	Duration	Implementation date	Amount Sanctioned (in Rs.)	Ongoing/completed
Interfacial coupling and defect mediated exchange bias in Cobalt based Heusler alloy thin film heterostructures for Spintronics: Structural, magnetic and spin-dependent transport study	IUAC, New Delhi (as PI)	3 Years (2021-24)	Sept. 15, 2021	Rs. 5,15,462	Ongoing
Investigations on magnetism and spin-polarized magnetotransport behaviour in half-metallic oxide ferromagnets and Heusler alloys for spintronic applications	UGC-DAE CSR Indore (as PI)	3 Years			Accepted (2023)

9. CONTRIBUTION TO CORPORATE LIFE OF THE UNIVERSITY:

Sl. No.	Capacity	Nature of Work
1.	Member	Research, Innovation and Extension of 7-Quality Indicator Frameworks (QIF) of NAAC of the University
2.	Member	Paridhaan Committee , constituted for the purpose of organizing First convocation of the University
3.	Member	Committee constituted to prepare and finalize the proposal for the establishment of new teaching departments in Mahatma Gandhi Central University
4.	Member	Stock Verification Committee of the University
5.	Member	Committee constituted for draft Ordinance on ' Admission of Students to the University '
6.	Member Secretary	Committee constituted to scrutinise and review the existing Fee structures for various PG courses in the University for academic session 2019-2021
7.	Member Secretary	Committee constituted to finalize the Prospectus of the University for Admission of students in various postgraduate and Ph.D. Programmes during academic session 2019-20
8.	Member	World Book Fair committee
9.	Member	Member, drafting of ' Standard Operating Procedures (SOPs) ' for entrance examination of the University, i.e. GET & MET-2017

10.	Member	To prepare the draft Ordinance for “ Medium of Instruction, Examination, Evaluation and Grading System for Doctor of Philosophy programme ” of Mahatma Gandhi Central University, Bihar
11.	Member	To prepare the draft Ordinance for “ Medium of Instruction, Examinations, Evaluation and Grading System for Programme(s) of Study Other than Research Degree Programme(s) ” of Mahatma Gandhi Central University, Bihar
12.	Member	Assistance in Controller of Examinations (CoE) Office from Dec. 2016 to Jul 2017

10. MEMBERSHIP OF SOCIETIES / PROFESSIONAL BODIES:

1. Life membership of Materials Research Society of India (LMB3394)
2. Life membership of Ion Beam Society of India (LM271/2018)
3. Life membership of Magnetics Society of India (LM775)
4. Life membership of Indian Physics Association (GEN/LM/13360)

10. PUBLICATIONS:

A. PAPERS IN REFEREED/PEER REVIEWED JOURNALS:

1. Numerical simulation study on the photovoltaic performance of Tin-based perovskite solar cell using CuSCN as a hole transport layer giving 32% theoretical efficiency
Nilesh Bhardwaj, Rahutosh Ranjan, Anadi Krishna Atul, Rajanish N. Tiwari, Arvind Kumar Sharma and **Neelabh Srivastava**
Ind. J. Phys. (Accepted, 2023)
2. Impact of tin-based perovskite as a hole transport layer on the device performance of stable and 27.10% efficient CdTe-based solar cell by numerical simulation
Rahutosh Ranjan, Amarjeet Kumar, Nilesh Bhardwaj, Anadi Krishna Atul, Rajanish N. Tiwari, Arvind Kumar Sharma and **Neelabh Srivastava**
J. Phys. Chem. Solids **181** (2023) 111546-1-12
3. Numerical study of eco-friendly Sn-based Perovskite solar cell with 25.48% efficiency using SCAPS-1D

- Raj Jaiswal, Rahutosh Ranjan, **Neelabh Srivastava**, Arvind Kumar Sharma, Masamichi Yoshimura, Li Chang and Rajanish N. Tiwari
J. Mater. Sci.: Mater. Electron. **34** (2023) 753-1-17
4. Stress driven growth of ZnO nanowires through thermal oxidation of Zinc thin films over silicon substrate
Neelabh Srivastava and Wolfgang Bolse
J. Mater. Sci.: Mater. Electron. **34** (2023) 616-1-16
 5. Synthesis and characterization of NiO nanoparticles by chemical co-precipitation method: An easy and cost-effective approach
Anadi Krishna Atul, Sunil Kumar Srivastava, Ajai Kumar Gupta and **Neelabh Srivastava**
Brazilian Journal of Physics **52** (2022) 2
 6. Conductivity, Dielectric and Modulus Study of NH₄PF₆Based Zwitterionic Polymer Electrolyte
Manindra Kumar and **Neelabh Srivastava**
Recent Innovations in Chemical Engineering **14** (2021) 71-79
 7. Study on thermodynamic, electronic and magnetic properties of RE₂Cu₂Cd (RE=Dy-Tm) intermetallics: First-principle calculation
Naveen Kumar, Sachin Kumar, Kamna Yadav, Arvind Kumar, Pawan K. Singh, **Neelabh Srivastava** and Rishi P. Singh
Bulletin of Materials Science **43** (2020) 81
 8. Magnetic and Structural Properties of exchange coupled Heusler alloy NiO/Co₂FeAl Interfaces with n- and p-type Silicon Substrates
Arvind Kumar, **Neelabh Srivastava** and P.C. Srivastava
Journal of Electronic Materials **49** (2020) 712-719
 9. Effect of interfacial modifications on magnetic, morphological and transport properties of CoFe/n-Si thin film structures using ion irradiation
Arvind Kumar, **Neelabh Srivastava** and P. C. Srivastava
Nuclear Inst. and Methods in Physics Research B **451** (2019) 79-88
 10. Microstructural, magnetic and magneto-transport properties of NiO thin film deposited on Si (100) substrates
Neelabh Srivastava and P. C. Srivastava
J. Mater. Sci.: Mater Electron **27** (2016) 11478-11487
 11. Heavy ion induced modifications on morphological, magnetic and magneto transport behaviour of exchange biased Fe/NiO and NiO/Fe bilayers with Si substrate for spintronic applications
Neelabh Srivastava and P. C. Srivastava
J. Mater. Sci. **50** (2015) 7610-7626
 12. Electronic and magneto-transport study across swift heavy ion irradiated

exchange coupled Fe/NiO bilayer on Si substrate

Neelabh Srivastava and P. C. Srivastava

Physica E **73** (2015) 7-11

- 13.** Injecting electrode controlled electronic transport across Fe₃O₄ film-Si interfacial structure
Surajit Ghosh, **Neelabh Srivastava** and P. C. Srivastava
J. Alloys Compd. **612** (2014) 418-424
- 14.** Effect of ion irradiation on magnetic property of exchange coupled interfacial structures of Fe/NiO and NiO/Fe on Si substrates
Neelabh Srivastava and P. C. Srivastava
Radiation Effects and Defects in Solids **169** (2014) 529-537
- 15.** Irradiation induced modifications in microstructural and magnetic property of Fe₅₀Ni₅₀ (Permalloy)/Si interfacial structure
P. C. Srivastava, P. S. Pandey, **Neelabh Srivastava** and M. K. Srivastava
Radiation Effects & Defects in Solids **169** (2014) 1-8
- 16.** Core level X-ray photoelectron spectroscopy study of exchange coupled Fe/NiO Bilayer interfaced with Si substrate (Fe/NiO-nSi structure)
Neelabh Srivastava, T. Shripathi and P. C. Srivastava
Journal of Electron Spectroscopy and Related Phenomena **191** (2013) 20-26
- 17.** Synthesis of NiO Nanowires/Nanorods and Their Magnetic Characteristics
Neelabh Srivastava and P. C. Srivastava
Mater. Focus **2** (2013) 421-428
- 18.** Synthesis of wurtzite ZnS nanocrystals at low temperature
Prayas Chandra Patel, **Neelabh Srivastava** and P. C. Srivastava
J. Mater. Sci.: Mater Electron **24** (2013) 4098-4104
- 19.** A study on exchange coupled structures of Fe/NiO and NiO/Fe interfaced with n- and p-silicon substrates
Neelabh Srivastava and P. C. Srivastava
J. Appl. Phys. **111** (2012) 123909-1-9
- 20.** Synthesis and characterization of (single- and poly-) crystalline NiO nanorods by a simple chemical route
Neelabh Srivastava and P. C. Srivastava
Physica E **42** (2010) 2225-2230
- 21.** Realizing NiO nano-crystals from a simple chemical method
Neelabh Srivastava and P. C. Srivastava
Bulletin of Materials Science **33**(2010) 653-656

B. BOOK CHAPTERS:

- 1.** Arvind Kumar, Swati, Manish Kumar, **Neelabh Srivastava** and Anadi Krishna Atul, 'Chapter 13: Nanoscale Characterization', in Book "Fundamentals of Low

Dimensional Magnets”, 2022, p. 245-268, CRC Press, Taylor & Francis, eBook
ISBN: 9781003197492

11. Patents/Copyrights /IPR (If Any)

NIL

12. INVITED TALKS:

NONE

13. PARTICIPATION & PRESENTATIONS IN SEMINARS/SYMPOSIA/WORKSHOPS/CONFERENCES:

International Conferences/Seminar/Workshop Attended

1. 1st International conference on Frontier Areas of Chemistry (ICFAC-2020) from Feb. 28-29, 2020 organized by Department of Chemistry, Mahatma Gandhi Central University, Bihar.
Title: “Stress induced growth of ZnO nanowires using thermal oxidation of Zn thin films over Si substrates: a catalyst free approach”
2. International Conference on Ion Beams in Materials Engineering and Characterization (IBMEC2016) from Sept. 28-Oct. 01, 2016 at IUAC, New Delhi.
Title: “In-situ HRSEM Investigations on Swift Heavy Ion Irradiated ZnO Nanowires”
3. IHFG Alpenseminar workshop in Bad-Hindelang from Sept. 29-30, 2014
Title: “Investigations on nucleation and growth of ZnO nanowires”
4. Workshop on “Ionenstrahlen&Nanostrukturen 2014 (Ion beams and Nanostructures 2014)” at University of Paderborn, Germany from July 20-22, 2014
Title: “On the influence of the ionic charge state on the deformation and sputtering of thin oxide films during swift heavy ion irradiation”
by B. Widmann, **N. Srivastava**, M. Bauer, J. Rensberg and W. Bolse
Title: “Segregation of noble metals in NiO during swift heavy ion irradiation”
by M. Bauer, **N. Srivastava**, B. Widmann, J. Rensberg and W. Bolse
5. “INDO-US International Workshop on Spectroscopy: Application to National Security (IU-IWSANS 2013)” organized by Department of Physics, Banaras Hindu University, India from Jan. 18-20, 2013.
6. International conference on “Joint European Magnetic Symposia 2012 (JEMS2012)” jointly organized by the Physics Department of the University of Parma, Italy and by the IMEM-CNR Institute, Parma held at Parma, Italy from Sept. 09-14, 2012.
Title: “Magnetic, structural and morphological study of Fe/NiO and NiO/Fe exchange coupled structure interfaced with Si” by **Neelabh Srivastava** and P. C. Srivastava
7. “International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS-2010)” held at Deptt. of Physics, B.H.U, Varanasi from Feb. 21-24, 2010.

National Conferences/Seminar/Workshop Attended

1. 6 Days Workshop on “Materials Characterization: Structure, Spectroscopy and Microscopy” organized by Department of Physics, Institute of Infrastructure, Technology, Research and Management (IITRAM), Ahmedabad from August 19-24, 2019.

2. National Conference on “*Smart Materials, Devices and Sustainable Technologies (SMDST-2019)*” organized by Deptt. of Applied Sciences, M.M.M. University of Technology, Gorakhpur from March 15-16, 2019.
3. “*Conference on Condensed Matter and Biological Systems (CCMB13)*” organized by Banaras Hindu University and University of Hyderabad held at Deptt. of Physics, B.H.U. from Jan. 11-14, 2013.
4. *6th One Day Conference on “New Trends in Research”* held at Department of Physics, B.H.U, Varanasi on Dec. 21, 2012.
5. *82nd Annual Session and National Symposium on “Nano-Science and Technology for Mankind”* organized by Banaras Hindu University, Varanasi during Nov. 29-Dec. 01, 2012.
6. “*5th International Conference on Electroactive Polymers Materials and Devices*” organized by Department of Physics, B.H.U, Varanasi on Nov. 04-09, 2012.
7. “*National Seminar on Active and Smart Materials (NSASM-12)*” organized by Deptt. of Applied Science (Physics), M.M.M. Engineering College, Gorakhpur from March 23-24, 2012.
8. *5th One Day Conference on “New Trends in Research”* held at Deptt. of Physics, B.H.U, Varanasi on Feb. 25, 2012.
9. Workshop on “*Writing Research Papers*” held at Deptt. of Physics, B.H.U, from June 10-11, 2011.
10. Workshop on “*Electronic and Ionic Materials and Devices*” held at Deptt. of Physics, B.H.U, from March 25-27, 2011.
11. “*National Seminar on Recent Trends in Condensed Matter Physics*” held at Deptt. of Applied Physics, IT-BHU, Varanasi from March 05-06, 2011.
12. *4th One Day Conference on “New Trends in Research”* held at Deptt. of Physics, B.H.U, Varanasi on March 03, 2011.
13. Conference on “*Swift Heavy Ions in Materials Engineering and Characterization (SHIMEC 2010)*” held at IUAC, New Delhi from Oct. 06-09, 2010.
14. *3rd One Day Conference on “New Trends in Research”* held at Deptt. of Physics, B.H.U, Varanasi on Mar. 30, 2010.
15. Workshop on “*Chemometrics/Techniques in Vibrational Spectroscopy*” held at Deptt. of Physics, B.H.U, Varanasi on Feb. 20, 2010.
16. National conference on “*Application of Material Science in Service of the Society-Second Series*” held at Deptt. of Chemistry, C.M.P. Degree College, Allahabad from Sept. 12-13, 2009.
17. Symposium on “*Recent Advances in Nano-Materials and their Applications*” held at B.H.U, Varanasi on March 07-09, 2009.
18. *2nd One Day Conference on “New Trends in Research”* held at Deptt. of Physics, B.H.U, Varanasi on Jan. 17, 2009.

19. "Seventeenth National Symposium on Ultrasonics" held at Deptt. of Physics, B.H.U, Varanasi from Dec. 04-06, 2008.

20. 1st One Day Conference on "New Trends in Research" held at Deptt. of Physics, B.H.U, Varanasi on Oct. 27, 2007.

Summer School attended

1. TEQIP-II sponsored *Short-Term Course* on "Application of Physical Sciences in Engineering & Technology (STCAPSET-16)" organized by Department of Applied Sciences, M.M.M. University of Technology, Gorakhpur from July 02-08, 2016.

1. Summer school on Fundamental Astronomy, Astrophysics and Atmospheric Physics from June 05 to June 23, 2006 held at Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, India.

14. AWARDS, FELLOWSHIPS & OTHER DISTINCTIONS:

- **2016: Dr. D. S. Kothari Postdoctoral Fellowship** awarded by University Grants Commission (U.G.C.), New Delhi, India.
- **2012: Senior Research Fellowship (SRF)** awarded by Council of Scientific & Industrial Research (CSIR), New Delhi, India.
- **2009: Research Fellowship in Science for Meritorious Students (RFSMS)** awarded by University Grants Commission (U.G.C.), New Delhi, India.
- **2005: SRI SHEO NIDHI LAL SRIVASTAVA memorial medal** for obtaining the highest marks in B.Sc. examination, 2005; awarded by St. Andrew's College (affiliated to D.D.U. Gorakhpur University, Gorakhpur), Gorakhpur (U.P.), India.

15. ANY OTHER SIGNIFICANT INFORMATION:

1. Successfully completed the 80th Orientation Course at HRDC-BHU from July 21-August 17, 2018.
2. Two Weeks Faculty Development Programme on "MANAGING ONLINE CLASSES and CO-CREATING MOOCS:2.0" organized by Teaching Learning Centre of Ramanujan College, University of Delhi from May 18 - June 03, 2020.
3. One-week Online Faculty Development Programme on "Recent Advances in Material Science and Research Ethics" organized by Physics and Material Science Department, Madan Mohan Malaviya University of Technology Gorakhpur-273010, India during Sept. 21 – 25, 2020.
4. One-week Online Faculty Development Programme on "Recent Trends in Advanced Materials and Applications" organized by Department of Physics, NIE, Mysuru from Oct. 19 – 23, 2020.
5. One week Faculty Development Programme on "HIGHER EDUCATION: ROAD AHEAD DEVELOPING NEXT GENERATION ACADEMIC LEADERS" organized by Dept. of Commerce &

- IQAC, Sri Venkateswara College in collaboration with Teaching Learning Centre of Ramanujan College, University of Delhi from Nov. 25 -Dec. 01, 2020.
6. One week Faculty Development Programme on "ACADEMIC WRITING" organized by Teaching Learning Centre of Ramanujan College, University of Delhi from Feb. 18-24, 2021.
 7. Participated in One Week Capacity Building Programme on "Implementation of Blended Learning in Higher Education" Organized by School of Education, IQAC and Research and Development Cell, Mahatma Gandhi Central University, Bihar in Collaboration with Commonwealth Educational Media Centre for Asia, New Delhi from Oct. 08-12, 2021.
 8. Participated in One Week Capacity Building Programme on "Implementation of Blended Learning in Higher Education" Organized by School of Education, IQAC and Research and Development Cell, Mahatma Gandhi Central University, Bihar in Collaboration with Commonwealth Educational Media Centre for Asia, New Delhi from Nov. 22-26, 2021
 9. One week Faculty Development Programme on "SAFETY AND HYGIENE IN ONLINE (CYBER) WORLD" organized by Teaching Learning Centre of Ramanujan College, University of Delhi from March 01-08, 2021.
 10. Successfully completed online Two-week Refresher course in Physics from 31st October to 14th November 2022, organized by Teaching Learning Centre, Ramanujan College, University of Delhi.
 11. Organizing Secretary, National Conference on Physics and Chemistry of Advanced Materials (NCPCAM-2019), organized by Department of Physics, Mahatma Gandhi Central University, Motihari from Nov. 22-23, 2019.
 12. Organizing Secretary, Online One-week National Workshop on "Advanced Physical Tools and Techniques for Materials Characterization" organized by Department of Physics, Mahatma Gandhi Central University, Motihari (Bihar) from 28th July to 03rd August 2020.
 13. Organizing Secretary, Virtual workshop on "Probing Materials using Spectroscopic Tools: Basics and Applications" organized jointly by Department of Physics and Maharshi Kanad Centre for Interdisciplinary Research, Mahatma Gandhi Central University, Motihari (Bihar) from 28th February to 04th March 2022.

(Dr. Neelabh Srivastava)