



Miranda House

UNIVERSITY OF DELHI

Name: Bilasini Devi Naorem

Department: Physics

Current Designation: Associate Professor

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Academic Qualifications:

- Post- Graduation M.Sc. Physics (2001) Miranda House, University of Delhi
- Graduation B.Sc. (Hons.) Physics (1999) Miranda House, University of Delhi

Joint CSIR-UGC JRF-NET Examination (December, 2001)

Research Degree:

- Ph.D. University of Delhi

Field of Specialization under the Subject/Discipline: Applied Plasma Physics; Plasma Processing of Nanomaterials: Metal Nanostructures and Characterizations

Total Teaching Experience: 18 Years

Teaching at Miranda House since: 11 March 2005

List of Publications:

- **Bilasini Devi Naorem**, Jatinder Pal Singh, Babita Sharma, Satyam Garg, Athira C, Hashima Sherin, Mahima Momaliya, Muskan, Shubhi Sahu, Arijit Chowdhuri, Mallika Verma, Monika Tomar, Neha Batra (2025) *Mn-doped ZnO thin films as a platform for reagentless uric acid biosensor*, Chemical Physics Impact, Volume 10, 100823 (<https://doi.org/10.1016/j.chphi.2025.100823>)
- Laishram Rashi Devi, **Bilasini Devi Naorem**, Arijit Chowdhuri, H. Basantakumar Sharma (2024) *Flexible PVDF/BST nanocomposites for mechanical energy harvesting application*, Journal of Alloys and Compounds, 1004, 175762 (<https://doi.org/10.1016/j.jallcom.2024.175762>)
- Laishram Rashi Devi, **Bilasini Devi Naorem**, Arijit Chowdhuri, H. Basantakumar (2024) Sharma, *Influence of Sr²⁺ ion content on the structural and electrical properties of Ba₁₋*



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$x\text{Sr}_x\text{TiO}_3$ nanopowders, J Mater Sci: Mater Electron **35**, 2089 (<https://doi.org/10.1007/s10854-024-13841-5>)

- Mahesh Prasad Srivastava, **Bilasini Devi Naorem** (2015) *Surface Plasmon Properties of Silver Nanostructures Fabricated Using Extremely Non-Equilibrium, Hot and Dense Plasma*, Advanced Materials Research, vol. 1110, Trans Tech Publications, Ltd., pp. 226–230. (Crossref, doi:10.4028/www.scientific.net/amr.1110.226)
- **Bilasini Devi Naorem**, Savita Roy, Yashi Malhotra, M.P. Srivastava (2013) *Fabrication of Gold Nanostructures and Studies of Their Morphological and Surface Plasmonic Properties*, Plasmonics Vol. **8**, 1273–1278 (<https://doi.org/10.1007/s11468-013-9546-6>)
- **Bilasini Devi Naorem**, Savita Roy, Yashi Malhotra, M.P. Srivastava (2012) *Optical, Surface and Structural Characterization of Gold Nanodots Synthesized using Highly Energetic Gold ions by Hot Plasma*, AES- Technical Reviews International Journal (Series) (International Conference on Advances and Trends in Engineering Materials and their Applications) p191-198.
- **Bilasini Devi Naorem**, Savita Roy, M.P. Srivastava (2010) *Deposition of aluminum nanoparticles using dense plasma device*, Journal of Physics: Conference Series, Vol. 108, p012103.
- **Bilasini Devi Naorem**, Savita Roy, M.P. Srivastava (2009) *Deposition of Germanium Nanostructures using Dense Plasma Focus Device and their Characterization*, Advances in Applied Plasma Science, Vol. 7, 244-247

Book Chapter

- Babita Sharma, Reema Gupta, Mallika Verma, Bilasini Naorem, and Monika Tomar (2024) *Realization of KNN-PVDF Cantilever for Mechanical Energy Harvesting*. In: Kotnala, R.K., Sharma Kaushik, A., Subramanian, S.S., Vishwakarma, A.K. (eds) *Advanced Functional Materials for Sustainable Environments*. Springer, Cham. Page 53-61 (https://doi.org/10.1007/978-3-031-62620-3_5)
- Gunjan Yadav, Kajal Jindal, Bilasini Naorem, and Monika Tomar (2024) *Droplet Based Triboelectric Nanogenerator (DB-TENG) by Conjunction of Photovoltaic and Triboelectric Effect* In: Kotnala, R.K., Sharma Kaushik, A., Subramanian, S.S., Vishwakarma, A.K. (eds) *Advanced Functional Materials for Sustainable Environments*. Springer, Cham. Page 121-128 (https://doi.org/10.1007/978-3-031-62620-3_11)
- Jai Shree Choudhary, Anisha, Aditya Gupta, Arijit Chowdhuri, Geeta Rani, Bilasini Devi Naorem, Mallika Verma, Monika Tomar and Ranjana Jha (2024) *A Comparative Study of Antimony Telluride and Bismuth Telluride for Thermoelectric Generation*. In: Khan, Z.H., Jackson, M., Salah, N.A. (eds) *Recent Advances in Nanomaterials*. ICNOC 2022. Springer Proceedings in Materials, vol 27. Springer, Singapore. (https://doi.org/10.1007/978-981-99-4878-9_38)



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Membership Of Professional Bodies:

- Life Member of Plasma Science Society of India
- Life Member of Indian Association of Physics Teacher

Administrative Responsibilities:

- Secretary, Staff Council, Miranda House (2021-2024)
- Deputy Superintendent, Semester Examinations, University of Delhi (2019)
- ICC Member (2016-18)
- Teacher in Charge (2015-17)
- Deputy Co-Ordinator, Central Evaluation Centre, University of Delhi (2016)

Seminars/Workshops/Conferences attended:

- Summer Internship Program: Flavors of Research: Investigative Research in Multidisciplinary Contexts, DS Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 13 June- 25 July, 2024
- Summer Internship Program: Flavors of Research: Investigative Research in Multidisciplinary Contexts, DS Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 6 June- 17 July, 2023
- Summer Internship Program: Flavors of Research: Investigative Research in Multidisciplinary Contexts, DS Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 9 June- 21 July, 2022
- 37th National Symposium on Plasma Science and Technology PLASMA 2022, IIT Jodhpur, Rajasthan, 12-14 December, 2022
Presented research work, Morphological and Plasmonic Properties of Silver Nanostructures Fabricated using Hot and Dense Plasma
- Inspire Internship Programme 2017 *Innovation in Science Pursuit for Inspired Research* DS Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 18-22 December, 2017
- Active Learning as a transformational tool for the university classroom, DS Kothari Centre, Miranda House on 15 May, 2017
- Active Learning Integrating Hands-on Experiments and Multimedia Resources: *A Collaborative*



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Workshop for Undergraduate Physics Teachers, Miranda House, Delhi University, Delhi, 7-8 October, 2013

- National Symposium on Plasma Science and Technology PLASMA 2012, University of Pondicherry, Pondicherry, 8-11 December, 2012

Presented research work, *Surface Plasmonic Properties of Ag-Au Bimetallic Nanostructures Fabricated by Hot Plasma* published in the Proceedings of 27th National Symposium on Plasma Science and Technology (ISBN: 978-93-82062-82-0)

- Indian Nanoelectronics Users' Programme Hands on Training Workshop on Fabrication Technologies, 9-13 April 2012, IIT Mumbai, Mumbai.
- International Conference and Workshop on Nanostructured Ceramics and Other Nanomaterials, 13-16 March 2012, University of Delhi, Delhi.

Presented research work, *Titanium nanostructures fabricated using hot and extremely non equilibrium plasma and their characterization*.

- Recent Trends in Synthesis and Applications of Advanced Materials, 5-6 December 2011, Maharaja Agrasen Institute, Delhi.
- National Symposium on Plasma Science and Technology PLASMA 2010, 8-11 December 2010, IASST, Guwahati, India.

Presented research work *AFM and XRD Studies of Copper Nanoclusters Fabricated on Glass using Dense Plasma Focus*.

- International Workshop on Plasma Diagnostics and Applications, 2-3 July, 2009, Singapore;

Presented research work *Plasma assisted fabrication of carbon nanostructures using dense plasma focus device* and published in the Proceedings of International Workshop on Plasma Diagnostics and Applications, 40-43.

- International Symposium on Applied Plasma Science, 31 August – 4 September, 2009, Hamburg, Germany

Presented research work *Deposition of germanium nanostructures using dense plasma focus device and their characterization*, and published in *Advances in Applied Plasma Science*, 2009, vol. 7, p 1340-3214.

Synergy:

- International Collaborations and Exchange Program & Research Initiatives (Indo-Dutch Program) on Management and Cultural Contexts jointly organized by Miranda House, Shri Ram College of Commerce, University of Delhi and Utrecht Business School, Utrecht, The Netherlands (2016).