Dr Abida Bashir

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Short Biography

Abida Bashir is a Senior Assistant Professor in the Department of Physics at Government Degree College, Anantnag, Kashmir, India, with expertise in teaching Electrodynamics, Mathematical Physics, Optics, and Solid-State Physics. Her academic journey includes earning an MSc from the University of Kashmir, where she topped her undergraduate studies and was awarded a gold medal. She later pursued her PhD at the National Institute of Technology, Srinagar, India. Her areas of interest include solid-state condensed matter physics, Thin Films and their irradiation, Transport properties, and Absorption spectroscopy. She holds both a Bachelor of Education and a Master of Education, with distinction. She is a member of the Indian Association of Physics Teachers and a resource person for Olympiad Examinations. She completed a project on the Irradiation of Thin Films of perovskites funded by the Inter University Accelerator Centre, New Delhi, India. She has made significant contributions to Physics, particularly in solid-state condensed matter physics, thin films, and their irradiation, transport properties, and absorption spectroscopy. She has published research in esteemed peer-reviewed international journals such as the *Journal of Condensed Matter*, *Materials Science and Engineering*, *Elsevier*, and *Carbon Letters*. Additionally, she has served as a reviewer for reputed journals like the *Journal of Alloys and Compounds*.

Online Information

Webpage	:	https://gdcboysang.ac.in/Departments/Science/Physics/
ORCID ID	:	https://orcid.org/0000-0002-2771-202X
Google Scholar	:	https://scholar.google.com/citations?user=CZYnttwAAAAJ&hl=en
Research Gate	:	https://www.researchgate.net/profile/Abida-Bashir-2?ev=hdr_xprf
Vidwan ID	:	660337

Experience

Lecturer
School Education Department
2008-2016.

Assistant Professor
Department of Physics
Government Degree College for Women
Anantnag
2016-2023

Sr. Assistant Professor
Department of Physics,
SHMM Govt. Degree College, Anantnag, J&K,
India
November 2023 – Present

Courses Taught

- Electrodynamics
- Solid State Physics
- Mechanics
- Modern Physics
- Thermodynamics and Statistical Physics
- Optics
- Atomic and Molecular Spectroscopy.

- Electronics And Network Skills

Education

- **National Institute of Technology,** Srinagar, J&K, India
  Ph.D. Condensed Matter Physics 2011
- **University of Kashmir**, Srinagar, J&K, India
  M. Sc. Physics, **72 %.**
- **University of Kashmir**, Srinagar, J&K, India
  B.Sc (Non Medical) 72% (Gold Medal)

Professional Membership

- **Indian Association of Physics Teachers (IAPT)**
- **Journal of Alloys and Compounds (Reviewer)**
- **IGNUO Counsellor**
- **Resource Person Olympaid Examinations**

Research Tools

- Rietveld
- Labview
- Python
- Origin
- Fortran

Professional Development Programs

1. **Training Program: Computer-Interfaced Science Experiments using ExpEYES** *06–11 October 2025*, Inter-University Accelerator Centre (IUAC), New Delhi Focused on hands-on experimentation and data acquisition using ExpEYES toolkit for physics education
2. **One-week Online Short-Term Course (STC) on "Recent Trends and Application of Nanotechnology in Engineering**" from 22 – 26 July, 2024 at Department of Physics, National Institute of Technology Srinagar
3. **National Workshop on Nanoscience – Opportunities and Challenges** *04–05 September 2018*, Dept. of Physics, Islamic University of Science & Technology, Kashmir
4. **Faculty Development Program: Emerging Trends in Physical, Chemical and Mathematical Sciences**
   14–20 February 2019, Islamic University of Science & Technology Awantipora, Kashmir
5. **Short-Term Course: Recent Advances in Nano Science and Nanotechnology (RANN_2020)** *24–28 August 2020*, Dept. of Physics, National Institute of Technology Srinagar (Online) Sponsored by TEQIP-III
6. **Short-Term Course: Current Trends in Condensed Matter Physics (CTCMP-2020)** *25–29 September 2020*, Dr. B R Ambedkar National Institute of Technology, Jalandhar Sponsored by TEQIP-III
7. **Workshop: Training and Practice on MATLAB for Engineering Solutions (TPMES)** *26–30 November 2020*, Dr. B R Ambedkar National Institute of Technology, Jalandhar Sponsored by TEQIP-III

8. **Short-Term Course: Mathematics Without Boundaries**
   23–27 November 2020, Dept. of Mathematics, National Institute of Technology Srinagar (Online)

Journal Publications

1. **Abida Bashir,** M. A. Khan, Mudasir Ahmad Khanday *Structural, magnetic, and electronic properties of doped Yb_2NiMnO_6 double perovskites Next Materials* 13 (2026) 103706. DOI: 10.1016/j.nxmate.2026.103706
2. **R. A. Zargar, A. Bashir, A. A. Wani, M. A. Khanday,** *Unravelling the magnetic properties of $Fe_{0.5}TeSe_{0.5}$ superconductor using Ginzburg–Landau (GL) formulation Discover Materials* 6:55 (2026). DOI: 10.1007/s43939-025-00411-7
3. M Abdullah Sheikh, R. S. Chandok, **A. Bashir** "Novel Nitrogen-Doped Carbon Dots for Degrading Azo Dyes and Sensing Heavy Metals" Journal of Chemical Health Risks 15(2) (2025) 283-297 DOI: 10.60829/JCHR.2024.1121944
4. M Abdullah Sheikh, R. S. Chandok, **A. Bashir** "Green perspective of N-CDs towards energy crisis and photodegradation of toxic dyes". Discover Materials (2024) 4:9 doi.org/10.1007/s43939-024-00079-5
5. M Abdullah Sheikh, R. S. Chandok, **A. Bashir** "High energy density storage, antifungal activity and enhanced bioimaging by green self-doped heteroatom carbon dots" Discover Nano (2023) 18:132 doi.org/10.1186/s11671-023-03910-9
6. M Abdullah Sheikh, R. S. Chandok, **A. Bashir** "Revolutionizing the sensing properties of green carbon dots for monitoring carbon dioxide and carbon monoxide at room temperature" Carbon Letters Volume 34, pages 2245–2257, (2024). doi.org/10.1007/s42823-024-00751-z.
7. R A Zargar, M M Hussain, **A. Bashir**, B. Alshahrani, M. Shakir "Development and Characterization of $(ZnO)_{0.90}$ $(CNT)_{0.10}$ thick film for photovoltaic application" Optik – International Journal for Light and Electron Optics. Volume 248, December 2021, 167975 doi.org/10.1016/j.ijleo.2021.167975.
8. Z. Habib, M. Ikram, K. Sultan, **A. Bashir**, S. A. Mir, K. Majid, K. Asokan "Electronic excitation-induced structural, optical, and magnetic properties of Ni-doped $HoFeO_3$ thin films." Appl. Phys. A (2017) 123:442" DOI 10.1007/s00339-017-1041.
9. **A. Bashir**, M. Ikram, R. Kumar, P. N. Lisboa-Filho "Structural, Electronic Structure and Magnetic studies of $GdFe_{1-X}Ni_XO_3$ $(0 \leq x \leq 0.5)$" Journal of Alloys & Compounds. 521 (2012) 183-188 doi.org/10.1016/J.JALLCOM.2012.01.121
10. **A. Bashir**, M. Ikram, R. Kumar. Studies Of Transport Properties Of RFe_{1-X} Ni_X O 3 $(x \leq 0.5)$ where R=Nd, Sm and Gd Modern Physics Letters B Vol. 25, No. 21 (2011) 1787–1794 https://doi.org/10.1142/S0217984911027042
11. **A. Bashir**, M. Ikram, Ravi Kumar, P. N. Lisboa-Filho, P. Thakur "Structural, Electronic structure and Magnetic studies of $SmFe_{1-X}Ni_XO_3$ $(0 \leq x \leq 0.5)$" Materials Science and Engineering B172 (2010) 242-247. https://doi.org/10.1016/j.mseb.2010.05.024
12. **A. Bashir**, M. Ikram, R. Kumar "Structural, Transport, Magnetic and Electronic structure studies of $NdFe_{1-X}Ni_XO_3$ $(x = 0.4, 0.5)$" Modern Physics Letters B Vol 25, No 32 (2011) 2439-2450. https://doi.org/10.1142/S0217984911027637
13. **A. Bashir**, M. Ikram, R, Kumar "Mössbauer and Magnetic studies of $PrFe_{1-X}Ni_XO_3$ $(x \leq 0.3)$" Journal of Magnetism and Magnetic Materials 322 (2010) 2581-2584. doi: 10.1016/j.jmmm.2010.03.024.
14. **A. Bashir**, M. Ikram, Ravi Kumar, P. Thakur, K. H. Chae, W. K. Choi, V. R. Reddy "Structural, magnetic and electronic structure studies of $NdFe_{1-X}Ni_XO_3$ $(0 \leq x \leq 0.3)$" Journal of Physics. Condensed Matter 21 (2009) 325501. DOI: 10.1088/0953 8984/21/32/325501

Conferences:

1. As Poster Presenter at **National Conference on Advances in Applied Physical Sciences (NCAAPS-2025)** held at Department of Physics, University of Jammu on 04-06 December 2025.
2. As Oral Presenter at Two-day **National Seminar on "Empowering Education Through Emerging Electronics: Pedagogical Innovations and Policy Perspectives in the Age of Artificial Intelligence and Smart Technologies"** on 25th to 26th November 2025.
3. As Oral Presenter in the **17th International Conference on Nanostructured Materials, NANO 2024,** held at Khalifa University, Abu Dhabi, UAE, November 3-8, 2024.
4. As an invited speaker at **8th Edition of International Conference on Nanotechnology for Better Living NBL-2023** from 25-29 May 2023 at National Institute of Technology Srinagar, a joint venture with the Indian Institute of Technology (BHU) Varanasi.
5. National Conference entitled **"Growth Points in Physics – II"** organized by the Department of Physics University of Kashmir, sponsored by UGC on 15th to 17th June, 2019.
6. Two-day International conference on "**Stress Management: Dimensions and Suggestive Measures** on 12th -13th June,2019, organized by the Department of Psychology, Government Degree College for Women Anantnag.

Book Chapters:

1. "A Comprehensive Study on Biomass Derived Carbon Dots" Mohd Abdullah Sheikh, Khan Abida and R S Chandok Asian Journal of Organic & Medicinal Chemistry Volume 7, Number 2 April - June 2022 ISSN: 2456-8937
2. Oxide-Based Nano-Sensors For Industrial and Environmental Monitoring Mohd Abdullah Sheikh, Khan Abida and R S Chandok Journal Of Optoelectronics Laser ISSN:1005-0086 Volume 41 Issue 5, 2022.

Leadership & Administrative Roles

- Convenor Research & Development Cell
- **Convenor** of the Admissions Committee, Energy Management Committee, Discipline Committee, and Research Committee.
- **Co-Convenor** of the Internal Complaints Committee (ICC).
- **Member** of the Board of Research Studies (University of Kashmir), Innovation Club, Science Purchase Committee, Research Development Committee, GSASH Cell, and the Institute's Innovation Council (IIC).
- **Organiser of the Research Methodologies Workshop (RMW-2026)** at SHMM Govt. Degree College, Anantnag, overseeing planning, scheduling, and coordination of sessions across disciplines.
- **Organised a special talk on scholarship opportunities and higher education abroad.**