

Tanveer Ahmad Dar, (Ph.D.)

Department of Physics Islamic University of Science and Technology,
Awantipora, India

✉ dartanveer2021@gmail.com

🐦 [@tanveer0111](https://twitter.com/tanveer0111)

🌐 <https://scholar.google.co.in/citations?user=Q6h-GLQAAAAJ&hl=en>

🌐 <http://www.linkedin.com/in/tanveer-ahmad-01860738>

📞 +91-7006212151, +91-9522559461



Current Position

Feb. 2023 - Present 📌 **Assistant Professor**, Department of Physics, Islamic University of Science and Technology, Awantipora -INDIA.

Experience and Responsibilities

Teaching 📌 I have teaching experience of more than 4 years at masters and undergraduate level. The main courses taught at masters level are:

- Condensed Matter Physics (2 Semesters)
- Physics of Nanomaterials (4 Semesters)
- Experimental Techniques (4 Semesters)
- Atomic and molecular Physics (2 Semesters)
- Nuclear Reactions and Detectors (2 semesters)
- Applied Physics (2 semesters to B. Tech)

Other Responsibilities 📌 Actively guiding M.Sc. physics and engineering undergraduate students for completion of project work and performing various experiments in Lab.

Interests and Experience 📌 Materials synthesis, PLD, Thin Film growth, Synchrotron based spectroscopy of thin films and Heterostructures for electronic/Spintronic applications; Especially of Oxides and Diluted Semiconductors, Magneto-dielectric Coupling. Synthesis of novel nano-structured materials and perform computational studies.

Additional Responsibilities 📌 Managing/organizing different events of national importance like seminars, workshops, conferences, schools etc at university level. Also taking active part in departmental purchase processes and handling of different research instruments and tools.

Employment History

Feb.,2021 - Dec. 2022 📌 **Lecturer**, Department of Physics, Islamic University of Science and Technology Awantipora -INDIA

May. 2018 - Dec. 2020 📌 **Assistant Professor**, Department of Physics, Islamic University of Science and Technology Awantipora -INDIA.

April. 2017 - May. 2018 📌 **Post-doctoral Fellow**, Department of Physics, Indian Institute of Technology Guwahati -INDIA.

Education

- Aug. 2013 - April 2017 ■ **Ph.D., Devi Ahilya Vishwavidyalya, Indore** Experimental Condensed Matter Physics.
Thesis title: *Electronic and Spin transport in Some Diluted Magnetic Semiconductor(DMS)/Semiconductor(s) Surfaces and Interfaces.*
- July 2011 - June 2012 ■ **M.Phil. Physics, Devi Ahilya Vishwavidyalya, Indore** Experimental Condensed Matter Physics.
Thesis title: *Pulsed Laser Deposited Nickel doped Zinc Oxide Thin Films & Their Characterization.*
- July 2008 - June 2010 ■ **M.Sc. Physics, Barkatullah Vishwavidyalaya, Bhopal India** Experimental Condensed Matter Physics.
Thesis title: *A Study on Multiferroic nature of Bismuth Ferrite and its synthesis by Sol-Gel method..*

Research Publications

Journal Articles

- 1 George, R. T., **Dar, T. A.**, Joshi, D. C., Sathe, V., Rathore, A. K., & Thota, S. (2019). Thermal hysteresis and vibrational excitations in NiO containing NaNbO₃. *Journal of Physics D: Applied Physics*, 52(11), 115301.
[doi:10.1088/1361-6463/aaf8d5](https://doi.org/10.1088/1361-6463/aaf8d5)
- 2 George, R. T., Joshi, D. C., Nayak, S., Tiwari, N., Chauhan, R. N., Pramanik, P., ... Thota, S. (2018). Effect of NiO substitution on the structural and dielectric behaviour of nanbo₃. *Journal of Applied Physics*, 123(5), 054101.
[doi:10.1063/1.5013643](https://doi.org/10.1063/1.5013643)
- 3 Soni, R., George, R., Joshi, D. C., Nayak, S., Pramanik, P., Suresh, P., ... Thota, S. (2017). Dielectric properties of (1 - x)KNbO₃ - xNiO two-phase composites. *Journal of Physics D: Applied Physics*, 50(41), 415305.
[doi:10.1088/1361-6463/aa82f6](https://doi.org/10.1088/1361-6463/aa82f6)
- 4 Agrawal, A., Saroj, R. K., **Dar, T. A.**, Baraskar, P., Sen, P., & Dhar, S. (2017). Insight into the effect of screw dislocations and oxygen vacancy defects on the optical nonlinear refraction response in chemically grown ZnO/Al₂O₃ films. *Journal of Applied Physics*, 122(19), 195303. [doi:10.1063/1.4993057](https://doi.org/10.1063/1.4993057)
- 5 Agrawal, A., **Dar, T. A.**, Andrews, J. T., Sen, P. K., & Sen, P. (2016). Negative thermo-optic coefficients and optical limiting response in pulsed laser deposited mg-doped ZnO thin films. *J. Opt. Soc. Am. B*, 33(9), 2015–2019.
[doi:10.1364/JOSAB.33.002015](https://doi.org/10.1364/JOSAB.33.002015)
- 6 **Dar, T. A.**, Agrawal, A., Sen, P. K., Choudhary, R. J., & Sen, P. (2016). Thermo-optic coefficients of pure and ni doped zno thin films. *Thin Solid Films*, 603, 115–118. [doi:https://doi.org/10.1016/j.tsf.2016.01.059](https://doi.org/10.1016/j.tsf.2016.01.059)
- 7 Agrawal, A., **Dar, T. A.**, Solanki, R., Phase, D. M., & Sen, P. (2015b). Study of nonlinear optical properties of pure and mg-doped zno films. *physica status solidi (b)*, 252(8), 1848–1853. [doi:https://doi.org/10.1002/pssb.201451686](https://doi.org/10.1002/pssb.201451686)
- 8 **Dar, T. A.**, Agrawal, A., Choudhary, R., & Sen, P. (2015). Electrical and magnetic transport properties of undoped and ni doped zno thin films. *Thin Solid Films*, 589, 817–821. [doi:https://doi.org/10.1016/j.tsf.2015.07.028](https://doi.org/10.1016/j.tsf.2015.07.028)
- 9 Agrawal, A., **Dar, T. A.**, Phase, D. M., & Sen, P. (2014). Type I and type II band alignments in ZnO/MgZnO bilayer films. *Applied Physics Letters*, 105(8), 081603. [doi:10.1063/1.4893986](https://doi.org/10.1063/1.4893986)
- 10 Agrawal, A., **Dar, T. A.**, Sen, P., & Phase, D. M. (2014). Transport and magnetotransport study of mg doped ZnO thin films. *Journal of Applied Physics*, 115(14), 143701. [doi:10.1063/1.4870864](https://doi.org/10.1063/1.4870864)
- 11 Agrawal, A., **Dar, T. A.**, & Sen, P. (2013). Structural and optical studies of magnesium doped zinc oxide thin films. *Journal of Nano- and Electronic Physics*, 5.
- 12 Agrawal, A., **Dar, T. A.**, Phase, D., & Sen, P. (2013). Anomalous band bowing in pulsed laser deposited Mg_xZn_{1-x}O films. *Journal of Crystal Growth*, 384, 9–12. [doi:https://doi.org/10.1016/j.jcrysgro.2013.08.036](https://doi.org/10.1016/j.jcrysgro.2013.08.036)
- 13 **Dar, T. A.**, Agrawal, A., & Sen, P. (2013). Pulsed laser deposited nickel doped zinc oxide thin films: Structural and optical investigations. *Journal of Nano- and Electronic Physics*, 5.

Conference Proceedings

- 1 Chouhan, R., Baraskar, P., **Dar, T. A.**, Agrawal, A., Gupta, M., Sen, P., & Sen, P. (2017). Effect of annealing on the optical properties of the ion beam sputtered nio thin film. (Vol. 1832). [doi:10.1063/1.4980531](https://doi.org/10.1063/1.4980531)
- 2 Baraskar, P., **Dar, T. A.**, Choudhary, R., Sen, P., & Sen, P. (2016). Electronic and optical studies of pulse laser deposited zno/nio bilayer film. (Vol. 755). [doi:10.1088/1742-6596/755/1/012036](https://doi.org/10.1088/1742-6596/755/1/012036)
- 3 Agrawal, A., **Dar, T. A.**, Solanki, R., Phase, D. M., & Sen, P. (2015a). Nonlinear absorption coefficient of pulsed laser deposited mgzno thin film. (Vol. 1665, p. 120021). [doi:10.1063/1.4918128](https://doi.org/10.1063/1.4918128)
- 4 **Dar, T. A.**, Agrawal, A., & Sen, P. (2015). Role of ni doping on transport properties of zno thin films. (Vol. 1665, p. 110018). [doi:10.1063/1.4918074](https://doi.org/10.1063/1.4918074)
- 5 Agrawal, A., **Dar, T. A.**, & Sen, P. (2014). Weak localization effect in pulsed laser deposited zno film. (Vol. 534). [doi:10.1088/1742-6596/534/1/012042](https://doi.org/10.1088/1742-6596/534/1/012042)

Skills

Languages	English, Urdu and Kashmiri
Softwares	L ^A T _E X, XPSPEAK41, Origin, Scilab,
Setting up of Laboratory	<ul style="list-style-type: none"> Nonlinear optical measurement setup in cw regime (z-scan experimental setup in open as well as closed aperture assembly) with He-Ne laser source at DAVV, Indore. Developed Low Temperature (LN₂) Dielectric Setup at Low Temperature lab, IIT Guwahati.
Instruments Familiar/Handled	<ul style="list-style-type: none"> Pulsed Laser Deposition System X-ray Diffraction Spectrometer (XRD). Operation of Nd: YAG and KrF pulsed lasers.
Characterization Methods	<ul style="list-style-type: none"> X-ray diffraction technique Angle Integrated and Resonant Photoemission spectroscopy using synchrotron radiation source facilities of UGC-DAE CSR Indore at Indus-I RRCAT Indore. Synchrotron based X-ray absorption spectroscopy Ultraviolet-visible spectroscopy: Optical absorption and transmission spectroscopy Hall measurements: Vander-Pauw Method & Four probe technique Magneto-transport measurements (2-300K) Magnetic Studies using SQUID VSM, MPMS 3 (Quantum Design). Z-scan technique in cw regime: Nonlinear optics and thermo-optics.
Growth Methods	<ul style="list-style-type: none"> Solid state reaction route for growth of polycrystalline bulk materials, Sol-gel synthesis. Pulsed Laser Deposition (high vacuum) for oxide thin films and multilayered structures.

Awards and Honors

- Dec. 2016 **Poster Presentation Prize**, in Winter School- on frontiers in materials science held at JNCASR Bangalore.
- Aug. 2016 **Poster Presentation Award**, in Conference on Study of Matter Using Intense radiation under Extreme Conditions at UGC-DAE CSR Indore, India.
- Sept. 2015 **Best Poster Award**, in 4th International Conference and Exhibition on Materials Science at Florida, USA.

Fellowships

- Sept.2015 **International Travel Grant** Awarded by MPCST Bhopal M.P -India.
- July 2014 **Fellowship for Training of Young Scientist**. Awarded by MPCST Bhopal, M.P-India.
- Feb. 2014 **Project Fellow**. in UGC-DAE CSR funded research Project.

Awards and Honors (continued)

📌 **Reviewer:** Journal of Materials Science: Materials in Electronics












Events Attended

- May. 23-May. 29, 2022 📌 Attended "Synergistic Training Program Utilizing The Scientific And Technological Infrastructure (STUTI)" organized by Department of Physics, University of Kashmir, Srinagar - India. and supported by Department of Science and Technology, Govt. of India.
- Dec. 23-Dec. 24, 2021 📌 Attended an E-Workshop on "Advanced Spectroscopy for Emerging Materials" organized online by CSIR-National Physical Laboratory, New Delhi.
- Oct. 26-Oct. 28, 2021 📌 Attended 27th International Conference of International Academy of Physical Sciences On Frontiers in Physics organized by IUST and University of Kashmir, Srinagar-India.
- May 1 May 5, 2021 📌 Attended the Short Term Course on Journey from Semiconductor Physics to Smart Devices to Intelligent Automation through online mode, jointly organized by NIT Srinagar and Semiconductor Society of India.
- July. 20-Aug. 15, 2020 📌 Completed the Online Certificate Course on PHYSICS WITH SCILAB with A+ performance, organized by Shri Shivaji Science College, Amravati-India.
- May.11 - July. 11, 2020 📌 Successfully completed an online non-credit course "What is Data Science?" authorized by IBM and offered through Coursera.
- July 29 - August 2, 2019 📌 Attended one week summer school on Quantum Mechanics, organized by Department of Physics, IUST Awantipora -India.
- Feb. 14 - Feb. 20, 2019 📌 Attended one week Faculty Development Program on Emerging Trends in Physical, Chemical and Mathematical Sciences at IUST, J & K -India.
- Sept. 4 - Sept. 5, 2018 📌 Attended two day National workshop on Nanoscience- Opportunities and Challenges organized by IUST Awantipora- India.
- Aug. 29- Aug. 30, 2013 📌 Attended two days Interaction Meeting on Photoelectron Spectroscopy organized by RRCAT, Indore- India.
- May. 24 - May. 25, 2013 📌 Attended Two Day School on Recent Developments in Magnetic Materials and Thin Films at UGC-DAE CSR Indore.
- March 14- March 16, 2012 📌 Attended three day school on Thin Film Magnetism organized by UGC-DAE, CSR, Indore-India.

Poster and Oral presentations

- March 1 - March 3, 2018 📌 Gave an Oral Presentation in International Conference on Systems and Processes in Physics, Chemistry and Biology, (ICSPPCB- 2018) at Assam University, Silchar, Assam-India.

Poster and Oral presentations (continued)

- Dec. 18 - Dec. 21, 2017  Gave an Oral Presentation in International Conference on Advanced Nanomaterials and Nanotechnology, ICANN-2017, held , at IIT Guwahati, Assam- India.
- Dec. 17 - Dec. 21, 2017  Presented a paper in National Conference on Raman Spectroscopy at IIT Guwahati, Guwahati, Assam, India.
- Dec. 5 - Dec. 9, 2016  Poster Presentation in Winter School-2016 on frontiers in materials science held at JNCASR Bangalore.
- Nov. 3- Nov. 6, 2016  Poster Presentation in Conference on Study of Matter Using Intense radiation under Extreme Conditions at UGC-DAE CSR Indore, India.
- Sept. 14 -Sept. 16, 2015  Poster Presentation in the 4th International Conference and Exhibition on Materials Science and Engineering at Florida, USA.
- Feb. 28 - March 1, 2015  Gave an Oral Presentation in the 30th Young Scientist Congress organized by Madhya Pradesh Council of Science and Technology (MPCST) at Vigyan Bhawan, Bhopal- India.
- Feb. 28 - March 1, 2014  Gave an Oral Presentation in the 29th Young Scientist Congress organized by Madhya Pradesh Council of Science and Technology (MPCST) at Vigyan Bhawan, Bhopal- India.
- Dec. 16 - Dec. 20, 2014  Poster Presentation in the 59th DAE-SSPS-conference held at VIT, Vellore, Tamil Nadu-India.
- Dec. 1 - Dec. 5, 2014  Attended the International Workshop on Science and Technology of Free Electron Laser organized by School of Physics, DAVV, Indore.
- Feb. 21, Feb. 22, 2016  Poster Presentation in two day International conference on Recent trends in Physics organized by School of Phycis, DAVV, Indore- India.
- Feb.1 - Feb. 2, 2013  Poster Presentation in Second International Symposium on Semiconductor Materials and Devices (ISSMD-2) held at University of Jammu, Jammu -India

References

- 1 **Dr. R. J. Choudhary**
Scientist -F, UGC-DAE CSR Indore
Mail id: ram@csr.res.in
- 2 **Prof. Subhash Thota**
Professor Department of Physics, IIT Guwahati
Mail id: subhashiitk@gmail.com
- 3 **Dr. Farooq Hussain Bhat**
Sr. Assistant Prof. Department of Physics, IUST Awantipora, India
email: fhbhat@gmail.com

Personal Details

Parentage: Ab Jabar Dar
Date of Birth: 09 Feb. 1985
Permanent Address: Village Wahipora, District Kupwara, Jammu and Kashmir, J & K- India-193302

Declaration

I hereby confirm that all the information given above is true to the best of my knowledge .

Place: Kupwara, J & K

Dated: 11 Dec. 2023.

TANVEER AHMAD DAR