

Curriculum Vitae

Dr. Shivangi Yadav
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ACADEMIC QUALIFICATIONS

Year	Degree	Institute/University/Board	% / CGPA
2025	Ph.D.	Madan Mohan Malviya University of Technology Gorakhpur	Awarded
2021	M.Tech	Madan Mohan Malviya University of Technology Gorakhpur	8.09/10 (hons)
2019	B.Tech. (E.C.E.)	Institute of Technology and Management GIDA Gorakhpur (AKTU)	75.46% (hons)
2015	Intermediate (XII)	Ramsakhi Ramniwas Convent School Bharauli, Gorakhpur (C.B.S.E)	70.33%
2013	High-School (X)	Ramsakhi Ramniwas Convent School Bharauli, Gorakhpur (C.B.S.E)	8.8/10

RESEARCH TOPIC

Title: “Design and performance Analysis of Highly Efficient Lead-Free Double Perovskite Photovoltaic Devices”

Supervisors: Dr. Pooja Lohia (Assistant Professor, MMMUT Gorakhpur)

Dr. Anupam Sahu (Assistant Professor, MMMUT Gorakhpur)

PROJECT UNDERTAKEN

- Title:** Electronics quiz game using c language.
Organization: ITM, GIDA.
Description: To build an electronic quiz game application using the c software the game may have one two or maximum of 4 players.
- Title:** Rain water detecting alarm system.
Organization: ITM, GIDA.
Description: To detect the rain and excess water flowing from the water tank.
- Title:** Photonic generation of arbitrary microwave signal based on tunable OEO.
Organization: MMMUT.
Description: Designing of optoelectronic oscillator using microwave photonic filter.

AREA OF INTEREST

- Embedded System

- Solar Photo-voltaic
- Optical Communication.
- Microwave Photonics.

SOFT SKIL

- Scaps-1D, C, Origin, Microsoft Office Suite, MATLAB, Opti-grating

SHORT TIME COURSES/ ONLINE COURSES/ TRAINING

- One-week short term course on “Recent Advances in Devices, Circuits and Communications” (RADCC-2020) jointly organized by Department of Electronics & communication Engineering, MMMUT Gorakhpur and Department of Electronics Engineering, SVNIT, Surat, Gujarat.
- One-week short term course on “Nascent Research Methodology: Challenge and Various Analytical Tools & Techniques” jointly organized by Department of Humanities and Management Science in collaboration with SVNIT, Surat, Gujarat and MMMUT Gorakhpur, U.P., India.
- FDP on “Recent Advances in Experimental Tools & Theoretical Technique” during 10-16 Nov. 2022 at MMMUT, Gorakhpur
- Successfully completed the “Executive Industrial Training Program on Application of ANSYS for Teaching and Research” organized by MMMUT, Gorakhpur in association with ANSYS certified elite channel partner ARK Infosolution during 23rd -29th April 2024
- One week FDP on “Recent Advances in Functional & Smart Materials-RAFSM” held during 03-07 Feb 2025 at MMMUT Gorakhpur.
- “IoT and Embedded System Design” four-week course from NIELIT Gorakhpur (U.P.).
- Secured 2nd position in workshop competition on “Internet of Things” organized by Technobeam Technologies.

PUBLICATIONS

Journal

1. **Yadav, S.,** Lohia, P. & Sahu, A. Enhanced performance of double perovskite solar cell using WO₃ as an electron transport material. **J Opt** (2022). <https://doi.org/10.1007/s12596-022-01035-3>.
2. **Yadav, S.,** Lohia, P. & Sahu, A. Impact of generation recombination rate in STO-enabled (FA)₂BiCuI₆-based double perovskite solar cell without HTL. **J Opt** (2023). <https://doi.org/10.1007/s12596-023-01535-w>.
3. Srivastava, V., Chauhan, R.K., Lohia, P. and **Yadav, S.,** 2023. Achieving above 25% efficiency from FA_{0.85}CS_{0.15}Pb (I_{0.85}Br_{0.15})₃ perovskite solar cell through harnessing the potential of absorber and charge transport layers. **Micro and Nanostructures**, 184, p.207691.

4. Srivastava, V., Chauhan, R.K., Lohia, P. and **Yadav, S.**, 2024. Investigation of Eco-friendly Perovskite Solar Cell Employing Niobium Pentoxide as Electron Transport Material using SCAPS-1D. *Transactions on Electrical and Electronic Materials*, pp.1-10.
5. Yadav, T., **Yadav, S.** and Sahu, A., 2023. Comparative performance analysis of perovskite/CIGS-based double absorber layer solar cell with BaSi₂ as a BSF layer. *Journal of Optics*, pp.1-8.
6. Kanchan, K., Sahu, A. and **Yadav, S.**, 2023. The improved performance with reduction in toxicity in CIGS solar cell using ultra-thin BaSi₂ BSF layer. *Journal of Nano-and Electronic Physics*, 15(2).
7. Gupta, A., Srivastava, V., **Yadav, S.**, Lohia, P., Dwivedi, D.K., Umar, A. and Mahmoud, M.H., 2023. Performance enhancement of perovskite solar cell using SrTiO₃ as electron transport layer. *Journal of Nanoelectronics and Optoelectronics*, 18(4), pp.452-458.
8. Gupta, A., **Yadav, S.**, Srivastava, V., Dwivedi, D.K., Lohia, P., Umar, A. and Mahmoud, M.H., 2023. Simulation of carbon-based perovskite solar cell using PBS-TBAI as a hole transport layer (HTL). *Science of Advanced Materials*, 15(5), pp.655-661.
9. Chaudhary, A.K., Pandey, P., **Yadav, S.**, Verma, S. and Sahu, A., Enhancement in Photodetector Sensitivity Using All-Inorganic Perovskite Absorber RbGeI₃ and Copper Bismuth Thiocyanate for Superior Charge Transport. *physica status solidi (b)*, p.2400398.
10. **Yadav, S.**, Lohia, P., Sahu, A. and Chaudhary, A.K., 2024. Design and optimization of (FA) ₂BiCuI₆-based double perovskite solar cells using kesterite CBTS as hole transport layer for high power conversion and quantum efficiency. *Physica Scripta*, 99(9), p.095516.
11. Chaurasia, S., Lohia, P., Dwivedi, D.K., Pandey, R., Madan, J., **Yadav, S.**, Singh, Y.K., Alotaibi, N.H. and Hossain, M.K., 2024. Highly efficient and stable Dion–Jacobson (DJ) 2D-3D perovskite solar cells with 26% conversion efficiency: A SCAPS-1D study. *Journal of Physics and Chemistry of Solids*, 191, p.112038.
12. **Yadav, S.**, Lohia, P., Sahu, A. and Dwivedi, D.K., 2024. Design insights into (FA) ₂BiCuI₆ based double perovskite solar cells employing different charge transport layers. *Optical and Quantum Electronics*, 56(10), p.1628.

Conferences

1. **Yadav, S.**, Kumar, R., Lohia, P. (2023). Photonic Generation of Arbitrary Microwave Signal Based on Tunable Optoelectronic Oscillator. In: Mishra, B., Tiwari, M. (eds) VLSI, Microwave and Wireless Technologies. Lecture Notes in Electrical Engineering, vol 877. Springer, Singapore. https://doi.org/10.1007/978-981-19-0312-0_67
2. **Yadav, S.**, Sahu, A., Lohia, P. (2023). Performance Evaluation of Eco-Friendly (FA)₂BiCuI₆ Double Perovskite Solar Cell for High Efficiency. In: Khan, Z.H., Jackson, M., Salah, N.A. (eds) Recent Advances in Nanotechnology. ICNOC 2022. Springer Proceedings in Materials, vol 28. Springer, Singapore. https://doi.org/10.1007/978-981-99-4685-3_42
3. Yadav, T., **Yadav, S.** and Sahu, A., 2023. Performance Analysis of Perovskite/CIGS Based Thin Film Solar Cell using BaSi₂ as BSF Layer. *AIJR Proceedings*, pp.6-13.
4. **Yadav, S.**, Lohia, P. and Sahu, A., Modeling and enhancement of double perovskite solar cell using WO₃ as electron transporting material and SrCu₂O₂ as hole transporting material. Materials Today: Proceedings, 104, pp.93-97. <https://doi.org/10.1016/j.matpr.2024.02.033>

LANGUAGE KNOWN

- Hindi
- English