

Shantanu Pathak

Senior Research Fellow
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Education

- **Ph.D. in Physics**, Indian Institute of Technology Delhi (2023–present), Coursework CGPA: 9.25
- **M.Sc. in Physics**, University of Delhi (2019–2021), CGPA: 7.9
- **B.Sc.**, M.L.B. Govt. PG College (2016–2019), Percentage: 83.11%
- **12th**, Sun Bright Sr Sec School, Nokha (2016), Percentage: 91%
- **10th**, Nav Nalanda Sr Sec School, Nokha (2014), Percentage: 84.5%

Expertise & Skills

- MS Office
- X-ray diffraction analysis (VESTA, fullProf, OriginPro)
- LaTeX
- Programming: Python, C
- Simulation Packages: VASP, FHI-aims, PyProcar, Quantum ESPRESSO

Awards and Qualifications

- INSPIRE Scholarship and Fellowship
- PMRF
- NSS Volunteer
- Best Poster Award, International Conference on 60 Years of DFT, IIT Mandi, 2024
- GATE 2022: Qualified, Rank 478
- JEST 2022: Qualified, Rank 7
- CSIR-UGC NET JRF June 2022: Qualified, Rank 59

Field of Interest

- Quantum Materials in Spintronics

Projects

- **KARYA Fellowship – DST Rajasthan**
- **Vainu Bappu Observatory, IIA** *Variation of $H\alpha$ emission strength of a T Tauri star: TW Hya* (May 2018–July 2018)
- **DST NIMAT Project 2018–19, Agra**

Conferences

- **International Conference on 60 Years of DFT: Advancements in Theory & Computation**, IIT Mandi, July 21–26, 2024 *Presented Poster – Awarded Best Poster*
- **EESTER-2025**, Organised by SRMIST and IIT Madras

Publications

1. Choudhary, S., Ghosh, J., **Pathak, S.**, Saini, S. K., Tailor, N. K., Sellin, P., **Bhattacharya, S.** & Satapathi, S.. Organic Spacers Modulated Low Dose X-Ray Detection in Hybrid Halide 2D Perovskites: Unveiling Exciton Dynamics. *Small*, 2409962 (2025).
2. Pathak, S., & Bhattacharya, S.. Strain-Induced Modulation of Spin Splitting and Persistent Spin Textures in Low-Symmetry 2D Hybrid Perovskites: A case study of RP phase. arXiv preprint arXiv:2506.01697 (2025).