

I am currently working as an Assistant Professor in the Department of Electronics and Communication Engineering at MANIT Bhopal, India. Prior to this appointment, I was a Postdoctoral Research Fellow in the Department of Electrical Engineering at IIT Kanpur, India (2024–2025). I also served as an Assistant Professor in the Department of Advanced Battery Convergence Engineering at Dongguk University, Seoul, Republic of Korea (2025–2026).

I obtained my B.E. degree in Electronics and Communication Engineering and M.Tech. degree in Microelectronics and VLSI Design from RGPV University Bhopal, India, in 2012 and 2017, respectively. I received my M.Phil. degree in Nano Sciences from the Central University of Gujarat, Gandhinagar, India, in 2021, and completed my Ph.D. in Department of Electrical Engineering from IIT Patna, India, in 2024.

I have authored and co-authored more than 25 publications in peer-reviewed international journals and conferences. My research focuses on oxide–2D material synthesis and characterization for electronic, optoelectronic, and emerging non-volatile memory technologies; fabrication and characterization of ReRAM crossbar arrays; photonic and phase-change computing systems; biosensors; neuromorphic computing hardware; semiconductor devices; and AI-enabled intelligent electronic systems. My work is directed toward the development of energy-efficient memory and computing architectures for next-generation artificial intelligence and brain-inspired computing systems.