

Homnath Luitel, PhD

Google Scholar: https://scholar.google.com/citations?user=yxwJ5GkAAAAJ&hl=en

Website: https://sites.google.com/view/homnath/home?authuser=0

Dr. Homnath Luitel currently serves as Assistant Professor-cum-Head at Department of Physics, Nar Bahadur Bhandari Government College (NBBGC), Tadong, Gangtok, India. He received his PhD from the Homi Bhabha National Institute (HBNI), Mumbai, India, conducting his doctoral research at the Variable Energy Cyclotron Centre (VECC), Kolkata, under the supervision of Prof. Dirtha Sanyal, FRSC. Subsequently, he worked as a Postdoctoral Research Fellow at the School of Physics, University of the Witwatersrand (Wits University), Johannesburg, South Africa. His research integrates theoretical and experimental approaches to investigate the structural, electronic, magnetic, and defect-related properties of advanced materials. His expertise encompasses Density Functional Theory (DFT), positron annihilation spectroscopy, ion-beam irradiation, and low-temperature magnetotransport measurements. He also has experience with advanced characterization facilities and techniques, including SQUID magnetometry, photoluminescence spectroscopy, X-ray diffraction, Raman spectroscopy, UV-Vis spectroscopy, nuclear magnetic resonance (NMR), and dilution refrigeration.

His research interests include defect-induced magnetism, dilute magnetic semiconductors, spintronic materials, nitrogen-doped diamond, functional materials, and diamond-based quantum technologies. His recent research particularly focuses on understanding defect energetics, magnetic ordering, and magnetotransport phenomena in diamond and other technologically relevant materials. He is also interested in computational materials science, quantum computing, and geophysical investigations of the Himalayan region. Dr. Luitel has authored over 30 research articles in international peer-reviewed journals and has presented his research at various national and international scientific conferences. His contributions have been recognized through the Best Research Contribution Award at the HBNI Research Scholars Meet (HBNI-RSM), IGCAR, in 2018, and the Best Research Award at the 6th Bharatiya Vigyan Sammelan, Ahmedabad, in 2023. In addition to his research and academic responsibilities, Dr. Luitel actively contributes to the scientific community as Keynote speaker, invited speaker, resource person, research mentor, and jury member in scientific programmes. As an Editorial Board Member, he brings interdisciplinary research expertise and a strong commitment to scholarly excellence, contributing to rigorous peer review, scientific originality, publication quality, and research integrity. He is a Life Member of the Indian Physical Society (IPS), Physics Academy of North East (PANE), and the Society for Positron Annihilation and Nuclear Probes (SPAN).