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AREAS OF EXPERTISE

Receptor Modelling and Source Apportionment, Secondary Formation, Particulate Matter Dynamics, Air Quality & Exposure, Air Pollution and Aerosol Science,

EDUCATION

Ph.D.	Subject	Year
Institute of Environment and Sustainable Development, And Indian Institute of Technology Banaras Hindu University	Environmental Science and Technology	2020

M.Sc. (Tech.)	Subject	Year
Faculty of Science Banaras Hindu University	Environmental Science and Technology	2012

B.Sc. (Hons.)	Subject	Year
A. N. College, Patna Magadh University	Environment and Water Management	2009

PROFESSIONAL EXPERIENCE

Assistant Professor (Environmental Sciences.), Patliputra University, Patna, Joining Year - 2026

Post-doctoral Experience(s)

2020-2022	National Aerosol Facility, IIT-Kanpur
2022-2024	CERIEE, Institut Mines-Télécom-NORD, Douai, France

PUBLICATIONS

Sources and meteorology 2 influencing highly-time resolved PM_{2.5} trace elements at 3 urban sites in extremely polluted Indo Gangetic Plain in 4 India. Measurement Reports. *Atmospheric Chemistry and Physics: Measurement report (In Press)*, <https://doi.org/10.5194/egusphere-2024-1385>.

Comparative analysis of winter composite-PM_{2.5} in Central Indo Gangetic Plain cities: Combined organic and inorganic source apportionment and characterization, with a focus on the photochemical age effect on secondary organic aerosol formation. *Atmospheric Environment*, (338), <https://doi.org/10.1016/j.atmosenv.2024.120827>.

Sources and Distribution of Light NMHCs in the Marine Boundary Layer of the Northern Indian Ocean During Winter: Implications to Aerosol Formation. *Journal of Geophysical Research: Atmospheres*, (129;3), <https://doi.org/10.1029/2023JD039433>.

Contribution of fossil and biomass-derived secondary organic carbon to winter water-soluble organic aerosols in Delhi, India. *Science of the Total environment*, (912) 2024,168655. <https://doi.org/10.1016/j.scitotenv.2023.168655>.

Real-time measurements of non-methane volatile organic compounds in the central Indo-Gangetic basin, Lucknow, India: source characterisation and their role in O₃ and secondary organic aerosol formation. *Atmospheric Chemistry and Physics*, 23, 3383–3408. <https://doi.org/10.5194/acp-23-3383-2023>.

Molecular distribution, sources and potential health risks of fine particulate-bound polycyclic aromatic hydrocarbons during high pollution episodes in a subtropical urban city,. *Chemosphere*, 340, 139943. <https://doi.org/10.1016/j.chemosphere.2023.139943>.

Insights into size-segregated particulate chemistry and sources in urban environment over central Indo-Gangetic Plain, *Chemosphere*, 263, 128030. <https://doi.org/10.1016/j.chemosphere.2020.128030>.

Source apportionment and health risk assessment of airborne particulates over central Indo-Gangetic Plain. *Chemosphere*, 257, 127145. <https://doi.org/10.1016/j.chemosphere.2020.127145>

Airborne particulate in Varanasi over middle Indo-Gangetic Plain: variation in particulate types and meteorological influences. *Environment Monitoring Assessment*, 189 (157). <https://doi.org/10.1007/s10661-017-5859-9>.

Fireworks induced particle pollution: A spatio-temporal analysis. *Atmospheric research*, 180 (1): 78-91. <https://doi.org/10.1016/j.atmosres.2016.05.014>.

Spatial variability in ambient atmospheric fine and coarse mode aerosols over Indo-Gangetic plains, India and adjoining oceans during the onset of summer monsoons, 2014. *Atmospheric Pollution Research*, 7(3): 521-532. <https://doi.org/10.1016/j.apr.2016.01.001>

Particulate morphology and elemental characteristics: variability at middle Indo-Gangetic Plain. *Journal of Atmospheric Chemistry*, 73: 165-179. <https://doi.org/10.1007/s10874-015-9321-5>

Wintertime Characteristics of Aerosols at middle Indo-Gangetic Plain: Impacts of Regional Meteorology and Long Range Transport. *Atmospheric Environment*, 104: 162- 175. <https://doi.org/10.1016/j.atmosenv.2015.01.014>

Temporal variability of MODIS aerosol optical depth and chemical characterization of airborne particulates in Varanasi, India. *Environmental Science and Pollution Research*, 22: 1329-1343. <https://doi.org/10.1007/s11356-014-3418-2>.

Air Pollution in New Delhi during Late Winter: An Overview of a Group of Campaign Studies Focusing on Composition and Sources. *Atmosphere* 2021, 12(11), 1432. <https://doi.org/10.3390/atmos12111432>.

Fine particulates over South Asia: Review and meta-analysis of PM_{2.5} source apportionment through receptor model. *Environmental Pollution*, 223:121-136. <https://doi.org/10.1016/j.envpol.2016.12.071>.

Source apportionment of airborne particulates through receptor modeling: Indian scenario. *Atmospheric Research*, 164-165 (1): 167-187. <https://doi.org/10.1016/j.atmosres.2015.04.017>.