

Sponsored Research Projects:

Title	Sponsored by	Duration
Ozone precursors and relationships in atmosphere at a semi-arid site.	ISRO-GBP	2007 – Ongoing
Chemical Characterization of PM _{2.5} at a rural site of Agra.	DST (WOS A)	2014 – 2017

Research Publications:

- Kirti Singh, Neelam Baghel, K Maharaj Kumari and Aparna Satsangi (2025). The infiltration, morphology and sources of indoor and outdoor fine particulate matter and metals at the urban residences of Agra, India. *Indoor and Built Environment*, p.1420326X251322871.
- Neelam Baghel, Anita Lakhani, Aparna Satsangi and K. Maharaj Kumari (2024) characteristics of BTEX, Formaldehyde and Trace gases: concentration, ozone formation potential and source apportionment at a campus site of Agra. *Environmental Monitoring and Assessment*, 196 (12), 1243. <https://doi.org/10.1007/s10661-024-13371-x>.
- Neelam Baghel, Sonal Kumari, Anita Lakhani, Aparna Satsangi and K. Maharaj Kumari (2023), Impact of COVID-19 Pandemic Lockdown on Atmospheric Concentrations of Particulate Matter, Trace Gases and Volatile Organic Compounds at a Suburban site of Agra, *Journal of Earth System Science*, 132, 169. <https://doi.org/10.1007/s12040-023-02181-3>.
- Neelam Baghel, Kirti Singh, Anita Lakhani, K. Maharaj Kumari and Aparna Satsangi (2023). A Study of Real-Time and Satellite data during the Agriculture Crop Residue Burning on Atmospheric Pollutants at a Downwind Site of the Indo-Gangetic Plain. *Pollutants*, 3(1), 166-180. <https://doi.org/10.3390/pollutants3010013>
- Neelam Baghel, Anita Lakhani, Aparna Satsangi and K. Maharaj Kumari (2022) Evaluation of Air Quality at Taj City at Dayalbagh during the Covid-19 Period. *International Journal of Environmental Science*, 11(2) 62-73. 10.13140/RG.2.2.10691.89129/1.
- Aparna Satsangi, Ankita Mangal, Awni Agarwal, Anita Lakhani, K. Maharaj Kumari (2021). Variation of carbonaceous aerosols and water-soluble inorganic ions during winter haze in two consecutive years. *Atmospheric Pollution Research*, 12(3), pp.242-251.
- Ankita Mangal, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2021). Characterization of ambient PM₁ at a suburban site of Agra: Chemical composition, sources, health risk and potential cytotoxicity. *Environmental Geochemistry and Health*, 43, pp.621-642.
- Awni Agarwal, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2020). Seasonal and spatial variability of secondary inorganic aerosols in PM_{2.5} at Agra: Source apportionment through receptor models. *Chemosphere*, 242, p.125132.
- Nidhi Verma, Aparna Satsangi, Anita Lakhani, and K. Maharaj Kumari (2018). Characteristics of surface ozone in Agra, a sub-urban site in Indo-Gangetic Plain. *Journal of Earth System Science*, 127(3), p.42.
- Ankita Mangal, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2018) Investigation of PM₁₀, PM_{2.5} and PM₁ during Pollution Episodes: Fog and Diwali Festival, *IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)* e-ISSN: 2319-2402, ISSN: 2319-2399. Volume 12, Issue 9 Ver. I (September. 2018), PP 16-23. www.iosrjournals.org.

- Nidhi Verma, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari. (2017) Low Molecular weight Monocarboxylic Acids in PM_{2.5} and PM₁₀: Seasonal Variation and Source Apportionment. *Aerosol Air Quality and Research*, 17, 485-498.
- Awni Agarwal, Ankita Mangal, Aparna Satsangi, Anita Lakhani, and K. Maharaj Kumari (2017). Characterization, sources and health risk analysis of PM_{2.5} bound metals during foggy and non-foggy days in sub-urban atmosphere of Agra. *Atmospheric Research*, 197, pp.121-131
- Nidhi Verma, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari and Shyam Lal, (2017). Diurnal, Seasonal, and Vertical Variability in Carbon Monoxide Levels at a Semi-Urban Site in India. *CLEAN–Soil, Air, Water*, 45(5), p.1600432.
- Awni Agarwal, Nidhi Verma, Rajneesh Kumar Meena, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari. (2016) Seasonal and Annual Trends in PM_{2.5} and PM₁₀ Mass Concentrations and Air Quality Index of Agra: A Five-Year Study. *Journal of Chemical, Biological and Physical Sciences*, 6, 1267-1282.
- Nidhi Verma, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2015) Prediction of Ground level Ozone concentration in Ambient Air using Multiple Regression Analysis. *Journal of Chemical, Biological and Physical Sciences*, Vol. 5, No. 4; 3685-3696.
- RK Meena Aparna Satsangi, Anita Lakhani & K. Maharaj Kumari (2014) Carbonaceous aerosols at an urban residential site in Agra. *Indian Journal of Radio and Space Physics*, 43(2), 156-162, ISSN:0975-105.
- Tripti Pachauri, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari. (2013) Chemical characterization of nutrients in seeds of underutilized grain: *Chenopodium album*, *Research in Environment and Life Sciences*, 6(2), 43-46.
- Aparna Satsangi, Tripti Pachauri, Vyoma Singla, Anita Lakhani & K. Maharaj Kumari (2013) Water Soluble Ionic Species in Atmospheric Aerosols: Concentrations and Sources at Agra in the Indo-Gangetic Plain (IGP). *Aerosol and Air Quality Research*, 13: 1877–1889, 2013.
- Tripti Pachauri, Aparna Satsangi, Vyoma Singla, Anita Lakhani, K. Maharaj Kumari. (2013). Characteristics and Sources of Carbonaceous Aerosols in PM_{2.5} during Wintertime in Agra, India, *Aerosol and Air Quality Research*, 13:977-991.
- Tripti Pachauri, Vyoma Singla, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2013) Characterization of carbonaceous aerosols with special reference to episodic events at Agra, India, *Atmospheric Research*, 128, 98-110.
- Tripti Pachauri, Vyoma Singla, Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari. (2013). SEM-EDX Characterization of Individual Coarse Particles in Agra, India, *Aerosol and Air Quality Research*, 13: 523–536.
- Tripti Pachauri, Vyoma Singla, Aparna Satsangi, Anita Lakhani & K. Maharaj Kumari. (2013) Characterization of major pollution events (dust, haze, and two festival events) at Agra, India, *Environmental Science and Pollution Research*, 20(8), pp.5737-5752.
- Aparna Satsangi, Anita Lakhani, K. Maharaj Kumari (2012) Organic and elemental carbon aerosols at a suburban site, *Atmospheric Research*, 113, 13–21.
- Tripti Pachauri, Vyoma Singla, Aparna Satsangi, Anita Lakhani and K. Maharaj Kumari (2012) Number and mass of ultrafine, fine and coarse atmospheric particles during different seasons at Agra, India, *Journal of Research in Ecology*, 1, 006-013.
- Neha Jain, Vyoma Singla, Aparna Satsangi, Tripti Pachauri, K. Maharaj Kumari and Anita Lakhani. (2012) Polycyclic Aromatic Hydrocarbon Emissions and Mutagenicity Assessment of Exhaust from a Diesel Generator. *Journal of Hazardous, Toxic, and Radioactive Waste Management*, 15, (1), 18-25.

- Vyoma Singla, Tripti Pachauri, Aparna Satsangi, K. Maharaj Kumari and Anita Lakhani. (2012) Characterization and Mutagenicity Assessment of PM_{2.5} and PM₁₀ PAH at Agra, India, *Polycyclic Aromatic Compounds*, 32(2) DOI: 10.1080/10406638.2012.657740.
- Vyoma Singla, Tripti Pachauri, Aparna Satsangi, K. Maharaj Kumari and Anita Lakhani. (2012). Surface Ozone Concentrations in Agra: Links with the prevailing meteorological parameters. *Theoretical and Applied Climatology*. 110, (3), 409-421. DOI:10.1007/s00704-012-0632-z.
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- Vyoma Singla, Tripti Pachauri, Aparna Satsangi, K. Maharaj Kumari and Anita Lakhani (2012) Assessment of surface ozone levels at Agra and its impact on wheat crop” published by Springer e- book, *Chemistry of Phytopotentials: Health, Energy and Environmental Perspectives* (ISBN 978- 3- 642- 23393- 7), (2011), 19: 299 - 303.
- Vyoma Singla, Aparna Satsangi, Tripti Pachauri, K. Maharaj Kumari and Anita Lakhani (2011). Ozone formation and destruction at a sub-urban site in North Central region of India. *Atmospheric Research*, 101(1-2), pp.373-385.
- Aparna Satsangi, Vyoma Singla Tripti Pachauri, Anita Lakhani and K. Maharaj Kumari (2010). Carbonaceous aerosols at a suburban site in Indo-Gangetic Plain. *Indian Journal of Radio and Space Physics* Vol.39 (4) 218-222.