



Miranda House

UNIVERSITY OF DELHI

Name: Dr. Shivani

Department: Chemistry

Current Designation: Assistant Professor (adhoc)

Email id: shivani.chemistry@mirandahouse.ac.in

Academic Qualifications:

Qualification	Institute	Year
Master of Science in Chemistry	Himachal Pradesh University	2015
Bachelor of Science	SCVB College, Himachal Pradesh	2013

Research Degree:

Qualification	Institute	Year
Doctorate of Philosophy	IGDTUW Govt. of NCT, Delhi	2020

Field of Specialization under the Subject/Discipline: Air quality monitoring, Chemical analysis of aerosols samples for organic compounds, ions, metals, organic carbon and elemental carbon

Total Teaching Experience: 1 year

Teaching at Miranda House since: December 2020

List of Publications:

1. Jangirh R, Ahlawat S, Arya R, Mondal A, Yadav L, Kotnala G, Yadav P, Choudhary N, Rani M, Banoo R, Rai A, Saharan US, Rastogi N, Patel A, **Shivani**, Gadi R, Saxena P, Vijayan N, Sharma C, Sharma SK, Mandal TK (2021) Gridded distribution of total suspended particulate matter (TSP) and their chemical characterization over Delhi during winter. *Environ Sci Pollut Res* <https://doi.org/10.1007/s11356-021-16572-w>
2. Garima Kotnala, Mukesh Kumar, Arun Kumar Sharma, Surendra Kumar Dhaka, Ranu Gadi, **Shivani**, Chirashree Ghosh, Mohit Saxena, Sudhir Kumar Sharma, Anindita Roy Saha, Aparna Nautiyal, Ashima Sharma, Chhemendra Sharma, Ravindra Kumar Kotnala, Tuhin Kumar Mandal (2021). Variations in chemical composition of aerosol during Diwali over mega city Delhi, India. *Urban Climate*, 40, 100991.
3. Cash, James M., Langford, Ben., Di Marco, Chiara., Mullinger, Neil J., Allan, James., Reyes-Villegas, Ernesto., Joshi, Ruthambara., Heal, Mathew R., Acton, W. Joe F., Hewitt, C. Nicholas., Misztal, Pawel K., Drysdale, Will., Mandal, Tuhin K., **Shivani.**, Gadi, Ranu., Gurjar, Bhola Ram., Nemitz, Eiko (2021) Seasonal analysis of submicron aerosol in Old Delhi using



Miranda House

UNIVERSITY OF DELHI

- high-resolution aerosol mass spectrometry: chemical characterisation, source apportionment and new marker identification. *Atmospheric Chemistry and Physics*, 21 (13). 10133-10158.
- Ernesto Reyes-Villegas, Upasana Panda, Eoghan Darbyshire, James M. Cash, Rutambhara Joshi, Ben Langford, Chiara F. Di Marco, Neil J. Mullinger, Mohammed S. Alam, Leigh R. Crilley, Daniel J. Rooney, W. Joe F. Acton, Will Drysdale, Eiko Nemitz, Michael Flynn, Aristeidis Voliotis, Gordon McFiggans, Hugh Coe, James Lee, C. Nicholas Hewitt, Mathew R. Heal, Sachin S. Gunthe, Tuhin K. Mandal, Bhola R. Gurjar, **Shivani**, Ranu Gadi, Siddhartha Singh, Vijay Soni, and James D. Allan (2021) PM 1 composition and source apportionment at two sites in Delhi, India, across multiple seasons. *Atmospheric Chemistry and Physics*, 21(15), 11655-11667.
 - Beth S. Nelson, Gareth J. Stewart, Will S. Drysdale, Mike J. Newland, Adam R. Vaughan, Rachel E. Dunmore, Pete M. Edwards, Alastair C. Lewis, Jacqueline F. Hamilton, W. Joe Acton, C. Nicholas Hewitt, Leigh R. Crilley, Mohammed S. Alam, Ülkü A. Sahin, David C. S. Beddows, William J. Bloss, Eloise Slater, Lisa K. Whalley, Dwayne E. Heard, James M. Cash, Ben Langford, Eiko Nemitz, Roberto Sommariva, Sam Cox, **Shivani**, Ranu Gadi, Bhola R. Gurjar, James R. Hopkins, Andrew R. Rickard, and James D. Lee (2021) In situ ozone production is highly sensitive to volatile organic compounds in the Indian megacity of Delhi. *Atmospheric Chemistry and Physics Discussions*, 1-36.
 - Gareth J. Stewart, Beth S. Nelson, Will S. Drysdale, W. Joe F. Acton, Adam R. Vaughan, James R. Hopkins, Rachel E. Dunmore, C. Nicholas Hewitt, Eiko Nemitz, Neil Mullinger, Ben Langford, **Shivani**, Ernesto Reyes-Villegas, Ranu Gadi, Andrew R. Rickard, James D. Lee and Jacqueline F. Hamilton (2021). Sources of non-methane hydrocarbons in surface air in Delhi, India. *Faraday Discussions*, 226, 409-431.
 - Shivani**, Gadi, R. Oxidative potential of ambient fine particulate matter for ranking of emission sources: an insight for emissions reductions, 2021 *Air Qual Atmos Health* 14, 1149–1153.
 - Gadi, R., **Shivani**, Sharma, S. K., & Mandal, T. K. (2019). Source apportionment and health risk assessment of organic constituents in fine ambient aerosols (PM_{2.5}): A complete year study over National Capital Region of India. *Chemosphere*, 221, 583-596.
 - Shivani**, Gadi, R., Sharma, S. K., & Mandal, T. K. (2019) Seasonal variation, source apportionment and source attributed health risk of carbonaceous aerosols in fine particulate matter over National Capital Region, India *Chemosphere* 237.
 - Shivani**, Ranu Gadi, Mohit Saxena, Sudhir Kumar Sharma, Tuhin Kumar Mandal (2019) Short-term degradation of air quality during major firework events in Delhi, India. *Meteorol Atmos Phys* **131**, 753–764.
 - Shivani**, Ranu Gadi, Sudhir Kumar Sharma, Tuhin Kumar Mandal, Ravi Kumar, Sharma Mona, Sachin Kumar & Sanchit Kumar (2018) Levels and sources of organic compounds in fine ambient aerosols over National Capital Region of India. *Environ Sci Pollut Res* **25**, 31071–31090



Miranda House

UNIVERSITY OF DELHI

Conferences Organised:

- A member of the Organizing Committee for the International Webinar on “Empowering Diversity in Science” held on 12 February 2021, organized by Department of Chemistry, Miranda House, University of Delhi.
- A member of the Organizing Committee for International conference, “Chemistry-the catalyst for change” held on 19-20 February 2021, organized by Department of Chemistry, Miranda House, University of Delhi.
- A member of the Organizing Committee for the Online two-week refresher course in Life Sciences held on 1-15 September 2021, organized by Teaching Learning Centre, Ramanujan College, University of Delhi, in collaboration with Department of Chemistry, Miranda House, University of Delhi.

Seminars/Workshops/Conferences attended:

- Ranu Gadi and **Shivani**. Source analysis and health risk assessment of organic constituents in fine ambient aerosols (PM_{2.5}) over the NCR, India. Recent Trends and Advancements in Chemical Sciences, held in Delhi University on 29th-31st March 2019.
- **Shivani**, Ranu Gadi, Sudhir Kumar Sharma, Tuhin Kumar Mandal, 2018. Effect of Diwali festival and stubble burning activities on the formation of Secondary Organic Carbon (SOC) in Delhi, India. 2018 joint 14th iCACGP Quadrennial Symposium/15th IGAC Science Conference, Takamatsu, Kagawa, Japan on 25th-29th September 2018.
- **Shivani** and Ranu Gadi. Seasonal Profile and Major Sources of organic compounds in the ambient atmosphere of Delhi. National Conference on “Climate Change and Sustainable Clean Environment”, Central University of Haryana, Mahendragarh Haryana, 22-23 November 2017.
- **Shivani**, D.P. Singh, Ranu Gadi, T.K. Mandal. Atmospheric concentrations and air-soil exchange of polycyclic aromatic hydrocarbons in Delhi, India. 19th National Space Science Symposium, Vikram Sarabhai Space Centre, Thiruvananthapuram, 9-12 February 2016.