

CURRICULUM VITAE

Dr. Dhananjay Kumar Deshmukh

DST-SERB Ramanujan Fellow

Aerosol, Trace Gases and Radiative Forcing Branch

Space Physics Laboratory (SPL)

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Research Interests : Atmospheric Aerosols: Chemical and Physical Properties
: Climate Effects of Aerosol-Cloud Interactions
: Modeling and Mitigation of Air Pollution

Nationality : Indian

Date of Birth : 20-10-1985

1. Educational Qualification

- Ph.D. in Chemistry**
Awarded on 23rd May 2013
Pt. Ravishankar Shukla University, Raipur, India
Ph.D. Thesis Title: Studies on distribution of low molecular weight organic acids in size-segregated aerosols
Thesis advisor: Prof. Manas Kanti Deb
- M.Sc. in Chemistry**
April 2008
Pt. Ravishankar Shukla University, Raipur, India
Marks obtained: 74.25%
- B.Sc. in Chemistry, Botany, Zoology**
March-April 2006
Pt. Ravishankar Shukla University, Raipur, India
Marks obtained: 68.22%

2. Academic Experience

- 21 December 2021 to now**
DST-SERB Ramanujan Fellow
Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, India
- 1 April 2019 to 11 November 2021**
Postdoctoral research fellow
Chubu Institute for Advanced Studies, Chubu University, Kasugai, Japan
- 1 April 2017 to 31 March 2019**
JSPS Pathway Postdoctoral research fellow
Chubu Institute for Advanced Studies, Chubu University, Kasugai, Japan
- 1 September 2016 to 31 March 2017**
Postdoctoral research fellow
Chubu Institute for Advanced Studies, Chubu University, Kasugai, Japan
- 1 September 2014 to 31 August 2016**
JSPS Standard Postdoctoral research fellow
Chubu Institute for Advanced Studies, Chubu University, Kasugai, Japan
- 1 July 2013 to 31 August 2014**
Postdoctoral research fellow
Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan
- 8 January 2013 to 31 May 2013**
Lecturer
Department of Chemistry, National Institute of Technology, Raipur, India

3. Current Areas of Research

- Investigation of the magnitude of light-absorbing carbonaceous aerosols on the direct aerosol radiative forcing.
- Assessment of sources and formation processes and climate impact of primary and secondary organic and inorganic tracer compounds associated with atmospheric aerosol particles.
- Investigation of the aqueous-phase formation mechanism of water-soluble organic compounds in mineral dust and sea-salt derived aerosol particles.
- Carbon and nitrogen isotopic signatures of atmospheric aerosols to understand the sources and formation pathways of carbonaceous and nitrogenous compounds.
- Examination of health risk and plausibility of incremental lifetime cancer risk through a pathway of toxic air pollutants such as polycyclic aromatic hydrocarbons and trace metals present in atmospheric particles.

4. Instrumental and Model Skills

- Aerosol Particle Sampler: High and Middle Volume Impactor
- Ion Chromatograph
- Organic Carbon and Elemental Carbon Analyzer
- Total Carbon and Total Nitrogen Analyzer
- Water-Soluble Organic Carbon and Water-Soluble Total Nitrogen Analyzer
- Elemental Analyzer-Isotopic Ratio-Mass Spectrometer
- Gas Chromatograph-Flame Ionization Detector
- Gas Chromatograph-Mass Spectrometer
- Hybrid Single-Particle Lagrangian Integrated Trajectory Model
- Principal Component Analysis and Positive Matrix Factorization Model
- ISORROPIA-II Thermodynamic Equilibrium Model

5. Awards and Fellowships

- Ramanujan Fellowship Award** from Science & Engineering Research Board (SERB), a Statutory body of Department of Science and Technology (DST), Govt. of India for five years from 21 December 2021 to 20 December 2026.
- Best Poster Presentation Award** at European Aerosol Conference (EAC) held in Zurich, Switzerland from 27 August to 1 September 2017.
- JSPS Postdoctoral Fellowship Award** (Pathway to University Position in Japan) from Japan Society for the Promotion of Science (JSPS), Tokyo, Japan for two years from April 2017 to March 2019.
- JSPS Postdoctoral Fellowship Award** (Standard) from Japan Society for the Promotion of Science (JSPS), Tokyo, Japan for two years from September 2014 to August 2016.
- Research Fellowship Award** from Pt. Ravishankar Shukla University, Raipur, India for three years from September 2009 to August 2012.
- Full Travel Funding Support** from University of Helsinki, Helsinki, Finland to present a research paper at the International Aerosol Conference (IAC) held in Helsinki, Finland from 29 August to 3 September 2010.

6. Member of Scientific Association

- Life Member: European Geosciences Union
- Life Member: Taiwan Association for Aerosol Research
- Life Member: Research Chemical Society of India
- Life Member: Indian Science Congress Association
- Life Member: Indian Chemical Society
- Life Member: Indian Council of Chemists

7. Abroad Visits

- Japan**
 - Postdoctoral research in Hokkaido University, Sapporo and Chubu University, Kasugai from July 2013 to 11 November 2021
- Switzerland**
 - Presentation of a research paper at European Aerosol Conference (EAC) held in Zurich from 27 August to 1 September 2017
- Austria**
 - Presentation of a research paper at European Geosciences Union (EGU) General Assembly held in Vienna from 16 to 23 April 2016
- United States of America**
 - Presentation of a research paper at American Geophysical Union (AGU) Fall Meeting held in San Francisco from 13 to 19 December 2015
 - Presentation of a research paper at Goldschmidt conference held in Boston from 12 to 17 August 2018
- Finland**
 - Presentation of a research paper at International Aerosol Conference (IAC) held in Helsinki from 27 August to 4 September 2010

8. Reviewer and Guest Editor of International Journal

- Scientific Reports © Nature
- Journal of Geophysical Research: Atmospheres © American Geophysical Union
- Atmospheric Chemistry and Physics © European Geosciences Union
- Atmospheric Environment © Elsevier
- Atmospheric Research © Elsevier
- Science of the Total Environment © Elsevier
- Chemosphere © Elsevier
- Environmental Pollution © Elsevier
- Atmosphere © MDPI
- Journal of Atmospheric Chemistry © Springer
- Environmental Monitoring and Assessment © Springer
- Journal of Earth System Science © Springer
- Aerosol and Air Quality Research © Taiwan Association for Aerosol Research
- International Journal of Environmental Analytical Chemistry © Taylor and Francis

- Climate © MDPI: Guest Editor of the Special Issue on Estimation of the Impact of Biomass Burning Emission on Climate
- Atmosphere © MDPI: Guest Editor of the Special Issue on Anthropogenic Derived Organic Aerosols in the Atmosphere

9. List of Publication

A. Research Papers Published in Peer-Reviewed International and National Journal

1. Y. Deng, H. Fujinari, H. Yai, L. Shimada, Y. Miyazaki, E. Tachibana, **Dhananjay Kumar Deshmukh**, K. Kawamura, Y. Nakayama, S. Tatsuta, M. Cai, H. Xu, F. Li, S. Ohata, Y. Kondo, A. Takami, S. Hatakeyama, M. Mochida, Offline analysis of the chemical composition and hygroscopicity of sub-micrometer aerosol at an Asian outflow receptor site and comparison with online measurements, **Atmospheric Chemistry and Physics**, 2022, DOI:10.5194/acp-2021-704.
2. P. Bikkina, S. Bikkina, K. Kawamura, V.V.S.S. Sharma, **Dhananjay Kumar Deshmukh**, Unraveling the sources of atmospheric organic aerosols over the Arabian Sea: Insights from the stable carbon and nitrogen isotopic composition, **Science of The Total Environment**, 827, 154260, 2022.
3. M.M. Haque, K. Kawamura, **Dhananjay Kumar Deshmukh**, B. Kunwar, Y. Kim, Biomass burning is an important source of organic aerosols in interior Alaska, **Journal of Geophysical Research: Atmospheres**, 126, 2021, DOI:10.1029/2021JD034586.
4. S.K. Verma, K. Kawamura, **Dhananjay Kumar Deshmukh**, M.M. Haque, C.M. Pavuluri, Seasonal characteristics of biogenic secondary organic aerosols over Chichijima Island in the western North Pacific: Impact of biomass burning activity in East Asia, **Journal of Geophysical Research: Atmospheres**, 126, 2021, DOI:10.1029/2020JD032987.
5. M.M. Haque, S.K. Verma, **Dhananjay Kumar Deshmukh**, B. Kunwar, Y. Miyazaki, K. Kawamura, Seasonal and temporal variations of ambient aerosols in a deciduous broadleaf forest from northern Japan: Contributions of biomass burning and biological particles, **Chemosphere**, 279, 130540, 2021.
6. R. Zhou, J. Chen, L. Ren, Y. Deng, P. Vodicka, **Dhananjay Kumar Deshmukh**, K. Kawamura, P. Fu, M. Mochida, Distinctive sources govern organic aerosol fractions with different degree of oxygenation in the urban atmosphere, **Environmental Science & Technology**, 55, 4494-4502, 2021.
7. **Dhananjay Kumar Deshmukh**, K. Kawamura, T. Gupta, M.M. Haque, Y.L. Zhang, D.K. Singh, Y.I. Tsai, High loadings of water-soluble oxalic acid and related compounds in PM_{2.5} aerosols in eastern central India: Influence of biomass burning and photochemical processing, **Aerosol and Air Quality Research**, 19, 2625-2644, 2019.
8. **Dhananjay Kumar Deshmukh**, M.M. Haque, Y. Kim, K. Kawamura, Organic tracers of fine aerosol particles in central Alaska: Summertime composition and sources, **Atmospheric Chemistry and Physics**, 19, 14009-14029, 2019.
9. M.M. Haque, K. Kawamura, **Dhananjay Kumar Deshmukh**, F. Cao, W. Song, B. Mengying, Y.L. Zhang, Characterization of organic aerosols from a Chinese Mega-City during winter: Predominance of fossil fuel combustion, **Atmospheric Chemistry and Physics**, 19, 5147-5164, 2019.

10. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S. Pervez, Characteristics of aerosol during major biomass burning events over eastern central India in winter: A tracer-based approach, **Atmospheric Pollution Research**, 10, 817-826, 2019.
11. **Dhananjay Kumar Deshmukh***, M.M. Haque, K. Kawamura, Y. Kim, Dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in fine aerosols over central Alaska: Implications for sources and atmospheric processes, **Atmospheric Research**, 202, 128-139, 2018.
12. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.K. Deb, S.K.R. Boreddy, Sources and formation processes of water-soluble dicarboxylic acids, ω -oxocarboxylic acids, α -dicarbonyls, and major ions in summer aerosols from eastern central India, **Journal of Geophysical Research: Atmospheres**, 122, 3630-3652, 2017.
13. **Dhananjay Kumar Deshmukh**, K. Kawamura, M. Lazaar, B. Kunwar, S.K.R. Boreddy, Dicarboxylic acids, oxoacids, benzoic acid, α -dicarbonyls, WSOC, OC, and ions in spring aerosols from Okinawa Island in the western North Pacific rim: Size distributions and formation processes, **Atmospheric Chemistry and Physics**, 16, 5263-5282, 2016.
14. **Dhananjay Kumar Deshmukh***, K. Kawamura, M.K. Deb, Dicarboxylic acids, ω -oxocarboxylic acids, α -dicarbonyls, WSOC, OC, EC, and ions in wintertime size-segregated aerosols from central India: sources and formation processes, **Chemosphere**, 161, 27-42, 2016.
15. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, S. Chandrawanshi, S. Tiwari, Seasonal size distribution and possible health implications of atmospheric aerosols collected from a rural site of eastern central India, **Atmospheric Pollution Research**, 7, 278-287, 2016.
16. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, K. Sopajaree, Mass loading and episodic variation of molecular markers in PM_{2.5} aerosols over a rural area in eastern central India, **Atmospheric Environment**, 117, 41-50, 2015.
17. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, Arabitol and mannitol as tracers from fungal contribution to size-differentiated particulate matter of rural atmospheric aerosols, **International Journal of Environmental Science and Development**, 6, 460-463, 2015.
18. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, Removal of phenol in aqueous solution by adsorption onto green synthesized coinage nanoparticles beads, **Research on Chemical Intermediates**, 41, 8363-8379, 2015.
19. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, Y.I. Tsai, S.K. Verma, Molecular markers in ambient aerosol in the Mahanadi Riverside Basin of eastern central India during winter, **Environmental Science and Pollution Research**, 22, 1220-1231, 2015.
20. C. Verma, **Dhananjay Kumar Deshmukh**, The ambient air and noise quality in India during diwali festival: a review, **Recent Research in Science and Technology**, 6, 203-210, 2014.

21. B.K. Sen, **Dhananjay Kumar Deshmukh***, M.K. Deb, D. Verma, J. Pal, Removal of phenolic compounds from aqueous phase by adsorption onto polymer supported iron nanoparticles, **Bulletin of Environmental Contamination and Toxicology**, 93, 549-554, 2014.
22. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, Microwave-assisted synthesis of silver nanoparticles using benzo-18-crown-6 as reducing and stabilizing agent, **Applied Nanoscience**, 4, 507-510, 2014.
23. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, B.K. Sen, Microwave-assisted synthesis of platinum nanoparticles and their catalytic degradation of methyl violet in aqueous solution, **Applied Nanoscience**, 4, 61-65, 2014.
24. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y. Suzuki, G.N. Kouvarakis, Water-soluble ionic composition of PM_{2.5-10} and PM_{2.5} aerosols in the lower troposphere of an industrial city Raipur, the eastern central India, **Air Quality, Atmosphere & Health**, 6, 95-110, 2013.
25. **Dhananjay Kumar Deshmukh**, M.K. Deb, S.L. Mkoma, Size distribution and seasonal variation of size-Segregated particulate matter in the ambient air of Raipur city, India, **Air Quality, Atmosphere & Health**, 6, 259-276, 2013.
26. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, Seasonal air quality profile of size-segregated aerosols in the ambient air of central India region, **Bulletin of Environmental Contamination and Toxicology**, 91, 704-710, 2013.
27. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, S.K. Verma. Mass loading of size-segregated atmospheric aerosols in the ambient air during fireworks episodes in eastern central India, **Bulletin of Environmental Contamination and Toxicology**, 90, 434-439, 2013.
28. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, D. Verma, Removal of methyl orange by activated carbon modified by silver nanoparticles, **Applied Water Science**, 3, 367-374, 2013.
29. **Dhananjay Kumar Deshmukh**, M.K. Deb, P.K. Hopke, Y.I. Tsai, Seasonal characteristics of water-soluble dicarboxylates associated with PM₁₀ in the urban atmosphere of Durg city, India, **Aerosol and Air Quality Research**, 12, 683-696, 2012.
30. **Dhananjay Kumar Deshmukh**, Y.I. Tsai, M.K. Deb, S.L. Mkoma, Characterization of dicarboxylates and inorganic ions in urban PM₁₀ aerosols in the eastern central India, **Aerosol and Air Quality Research**, 12, 592-607, 2012.
31. **Dhananjay Kumar Deshmukh***, Y.I. Tsai, M.K. Deb, P. Zampas, Characteristics and sources of water-soluble ionic species associated with PM₁₀ particles in the ambient air of central India, **Bulletin of Environmental Contamination and Toxicology**, 89, 1091-1097, 2012.
32. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, S.K. Verma, J. Nirmalkar, Aerosol size distribution and seasonal variation in an urban area of an industrial city in central India, **Bulletin of Environmental Contamination and Toxicology**, 89, 1098-1104, 2012.

33. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S.L. Mkoma, Water soluble ions in PM_{2.5} and PM₁ aerosols in Durg city, Chhattisgarh, India, **Aerosol and Air Quality Research**, 11, 696-708, 2011.
 34. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S.L. Mkoma, Atmospheric ionic species in PM_{2.5} and PM₁ aerosols in the ambient air of eastern central India, **Journal of Atmospheric Chemistry**, 66, 81-100, 2010.
 35. **Dhananjay Kumar Deshmukh**, M.K. Deb, S.K. Verma, Distribution patterns of coarse, fine and ultrafine atmospheric aerosol particulate matters in major cities of Chhattisgarh, **Indian Journal of Environmental Protection**, 30, 184-197, 2010.
- B. Research Papers Published in Proceeding of International and National Conference**
1. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.K. Deb, Sources and formation pathways of water-soluble dicarboxylic acids in urban aerosols collected from eastern central India, **Indian Aerosol Science and Technology Association**, 22, 53-57, 2016.
 2. **Dhananjay Kumar Deshmukh**, M.K. Deb, J. Pal, Water-soluble ionic composition of fine and coarse aerosols in the ambient air of central India, **Indian Aerosol Science and Technology Association**, 21, 67-71, 2016.
 3. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, B.K. Sen, Molecular characterization of dicarboxylate species in submicron (PM₁) aerosols in central India, **Indian Aerosol Science and Technology Association**, 20, 9-13, 2012.
 4. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, S.K. Verma, Assessment of ambient air quality through the air quality index and exceedance factor for the city of Durg, Chhattisgarh, **Recent Trends in Chemistry**, 44-50, 2012.
 5. **Dhananjay Kumar Deshmukh**, M.K. Deb, Atmospheric particulate pollutants and their relationship with meteorology in urban area of Raipur, India, **Advances in Environmental Chemistry**, 59-62, 2011.
 6. S.K. Verma, **Dhananjay Kumar Deshmukh**, M.K. Deb, Characteristics of aerosols over suburban site of eastern central region in India, **Advances in Environmental Chemistry**, 51-54, 2011.
 7. D. Verma, **Dhananjay Kumar Deshmukh**, S.K. Verma, M.K. Deb, The study of ambient coarse and fine aerosols at suburban location in Chhattisgarh state, **Advances in Environmental Chemistry**, 208-211, 2011.
 8. **Dhananjay Kumar Deshmukh**, M.K. Deb, The ion chemistry, seasonal cycle and sources of PM_{2.1-10} and PM_{2.1} aerosols in industrial city Korba, **Indian Aerosol Science and Technology Association**, 19, 590-598, 2010.

C. Research Papers Presented in International and National Conference in India and Abroad

- 1. Dhananjay Kumar Deshmukh, B. Ramya, S.K.R. Boreddy, P. Hegde, S.S. Babu, What drives the prevalence of atmospheric water-soluble organic aerosols over the tropical hill station in the Western Ghats? 21st National Space Science Symposium (NSSS), IISER Kolkata, India, 31 January to 4 February 2022.**
- 2. Dhananjay Kumar Deshmukh, K. Kawamura, M.K. Deb, Enhanced aqueous-phase formation of secondary organic aerosols on the surface of mineral dust particles, An International Conference on Recent Trends in Renewable Energy and Sustainable Development, Raipur, India, 30 and 31 January 2020.**
- 3. Dhananjay Kumar Deshmukh, A.K. Singh, K. Kawamura, Y.I. Tsai, S.K. Verma, Water-soluble diacids and related compounds in PM_{2.5} aerosols in eastern central India: influence of biomass burning and atmospheric processing, International Global Atmospheric Chemistry (IGAC) Conference, Takamatsu, Japan, 25 to 29 September 2018.**
- 4. Dhananjay Kumar Deshmukh, K. Kawamura, E. Tachibana, Stable carbon and nitrogen isotopic compositions of atmospheric aerosols from Chichijima Island in the western North Pacific, Goldschmidt Conference, Boston, United States of America, 12 to 17 August 2018.**
- 5. Dhananjay Kumar Deshmukh, D.K. Singh, Water-soluble organic compounds in the tropical aerosols from Indian region: Implications for sources and formation processes, All India Conference on Disruptive Technologies, Durg, India, 20 and 21 April 2018.**
- 6. Dhananjay Kumar Deshmukh, K. Kawamura, M.M. Haque, Y. Kim, Water-soluble dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in atmospheric aerosols during summer in central Alaska: An influence of biomass burning and biogenic sources, European Aerosol Conference (EAC), Zurich, Switzerland, 27 August to 1 September 2017.**
- 7. Dhananjay Kumar Deshmukh, M.M. Haque, K. Kawamura, Y. Kim, Dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in fine aerosols in the atmosphere of central Alaska: sources and atmospheric processes, UGC-SAP (DRS-II) National Conference on Advances in Environmental and Chemical Sciences, Raipur, India, 17 and 18 March 2017.**
- 8. Dhananjay Kumar Deshmukh, K. Kawamura, M. Kobayashi, D. Gowda, Water-soluble dicarboxylic acids and ω -oxocarboxylic acids in size-segregated aerosols over northern Japan during spring: Sources and formation processes, European Geoscience Union (EGU) General Assembly, Vienna, Austria, 17 to 22 April 2016.**
- 9. Dhananjay Kumar Deshmukh, K. Kawamura, M. Lazaar, B. Kunwar, S.K.R. Boreddy, Size distributions and formation pathways of organic and inorganic constituents in spring aerosols from Okinawa Island in the western North Pacific rim: An outflow region of**

Asian dusts, **American Geophysical Union (AGU) Fall Meeting, San Francisco, United States of America**, 14 to 18 December 2015.

10. **Dhananjay Kumar Deshmukh**, K. Kawamura, S.K.R. Boreddy, Water-soluble dicarboxylic acids and major ions in size-resolved aerosols at an urban site in India during summer: Size distribution and sources, **The 33th Symposium of the Japanese Association of Organic Geochemists, Sapporo, Japan**, 5 to 7 August 2015.
11. **Dhananjay Kumar Deshmukh**, K. Kawamura, Molecular distribution of water-soluble dicarboxylic acids and related compounds in size-segregated aerosols from eastern central India, **11th Asia Oceania Geoscience Society (AOGS), Sapporo, Japan**, 28 July to 01 August 2014.
12. **Dhananjay Kumar Deshmukh**, M.K. Deb, Chemical composition and source identification of PM₁₀ and PM_{2.5} aerosols in the ambient air of central India, **National Seminar on Environmental Protection and Sustainable Development, Raipur, India**, 16 February 2013.
13. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, Removal of nitrate from sample matrix by carboxymethyl cellulose (CMC) stabilized by zerovalent iron (ZVFe) nanoparticles for determination of ammonia by fourier-transform infrared spectroscopy, **Shaastrarth: An International Conference, Bhilai, India**, 8 to 9 February 2013.
14. **Dhananjay Kumar Deshmukh**, M.K. Deb, Particulate air pollution in the two urban areas of eastern central region of India, **The 11th Asian Urbanization Conference, Hyderabad, India**, 10 to 13 December 2011.
15. **Dhananjay Kumar Deshmukh**, M.K. Deb, Distribution and temporal behavior of airborne particulate matters (PM₁₀, PM_{2.5-10}, PM_{2.5} and PM₁) in Durg city, Chhattisgarh, India, **4th International Congress of Environmental Research (ICER), Surat, India**, 15 to 17 December 2011.
16. **Dhananjay Kumar Deshmukh**, M.K. Deb, Atmospheric particulate pollutants and their relationship with meteorology in urban area of Raipur, India, **International Conference on Advances in Environmental Chemistry, Aizawl, India**, 16 to 18 November 2011.
17. **Dhananjay Kumar Deshmukh**, M.K. Deb, Measurement of particulate matter concentrations in the atmosphere of central India and its statistical analysis, **National Seminar on Recent Trends in Chemical Sciences and Future Prospects, Durg, India**, 11 and 12 October 2011.
18. **Dhananjay Kumar Deshmukh**, Study on the seasonal variation and source identification of PM₁₀, PM_{2.5} and PM_{0.7} size fractions with reference to ionic species in Raipur, Chhattisgarh, **9th Chhattisgarh Young Scientist Congress, Jagdalpur, India**, 29 February to 1 March 2011.
19. **Dhananjay Kumar Deshmukh**, M.K. Deb, Characterization of dicarboxylic acids in atmospheric particles, **98th Indian Science Congress, Chennai, India**, 3 to 7 January 2011.

20. **Dhananjay Kumar Deshmukh**, M.K. Deb, Characterization of dicarboxylic acids in PM_{2.5-10} and PM_{2.5} atmospheric aerosols, **47th Annual Convention of Chemists and International Conference in Recent advances in Chemical Sciences, Raipur, India**, 23 to 27 December 2010.
 21. **Dhananjay Kumar Deshmukh**, M.K. Deb, Mass concentration, seasonal variation and sources of water-soluble inorganic species in size-segregated aerosol in lower troposphere of eastern central India, **International Aerosol conference (IAC), Helsinki, Finland**, 29 August to 3 September 2010.
 22. **Dhananjay Kumar Deshmukh**, M.K. Deb, The ion chemistry, seasonal cycle and sources of PM_{2.1-10} and PM_{2.1} aerosols in industrial city Korba, **Indian Aerosol Science and Technology Association (IASTA), Darjeeling, India**, 24 to 26 March 2010.
- D. Participation in International and National Symposium and Workshop in India and Abroad**
1. The international symposium on **“Frontier of Atmospheric Aerosol Studies: Towards the Understanding of the Health and Climate Effects”**, Nagoya University, Nagoya, Japan, 23 and 24 January 2018.
 2. The national conference of **“49th Annual Convention of Chemists”**, Bhopal, India, 12 to 15 December 2012.
 3. The international symposium on **“Environmental Analysis and Toxicological Issue of Speciation in Atmospheric Organic Aerosols”**, Pt. Ravishankar Shukla University, Raipur, India, 6 and 7 December 2012.
 4. Workshop on **“Prospection and Sustainable Use of Medicinal Plants of Chhattisgarh”**, Pt. Ravishankar Shukla University, Raipur, India, 10 and 11 September 2012.
 5. UGC sponsored workshop on **“How to Participation in International and National Conferences and Workshops and Training Courses”**, Pt. Ravishankar Shukla University, Raipur, India, 24 February to 2 March 2012.
 6. The national Conference on **“Emerging Trends in Science, Technology and Management”**, Kruti Institute of Technology and Engineering, Raipur, India, 4 February 2012.
 7. The national conference of **“99th Session of the Indian Science Congress”**, KIIT University, Bhubaneswar, India, 3 to 7 January 2012.
 8. The international symposium on **“Novel Approaches to Air Quality Management and Improvement in India”**, Pt. Ravishankar Shukla University, Raipur, India, 5 to 7 September 2011.

9. Workshop on “**Role of Woman in Management of Water Resources**”, organized by Central Water Board Bhopal, Govt. V.Y.T. PG. Autonomous College, Durg, India, 4 March 2009.
10. Workshop on “**Foundation of Chemistry**”, organized by IAS Bangalore, INSA New Delhi and NAH Allahabad, Govt. V.Y.T. PG. Autonomous College, Durg, India, 7 to 9 March 2008.

CURRICULUM VITAE

डॉ धनंजय कुमार देशमुख
डीएसटी-एसईआरबी रामानुजन फेलो

एरोसोल, ट्रेस गैस और रेडिएटिव फोर्सिंग शाखा
अंतरिक्ष भौतिकी प्रयोगशाला (एसपीएल)
विक्रम साराभाई अंतरिक्ष केंद्र (वीएसएससी)
भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो)
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Institutional E-mail: dhananjay@vssc.gov.in

अनुसंधान रुचियां : वायुमंडलीय एरोसोल: रासायनिक और भौतिक गुण
: एरोसोल-क्लाउड इंटरैक्शन के जलवायु प्रभाव
: वायु प्रदूषण की मॉडलिंग और शमन

राष्ट्रीयता : भारतीय

जन्म तिथि : 20-10-1985

1. शैक्षिक योग्यता

□ पीएच.डी. रसायन विज्ञान

23 मई 2013 को सम्मानित किया गया

पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर, भारत

पीएच.डी. प्रबंध शीर्षक: कम आणविक भार कार्बनिक अम्लों के आकार-पृथक एरोसोल में वितरण पर अध्ययन

प्रबंध सलाहकार: प्रो. मानस कांति देब

□ एमएससी रसायन विज्ञान

अप्रैल 2008

पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर, भारत

प्राप्त अंक: 74.25%

□ बी.एससी. रसायन विज्ञान, वनस्पति विज्ञान, प्राणीशास्त्र

मार्च-अप्रैल 2006

पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर, भारत

प्राप्त अंक: 68.22%

2. शैक्षणिक अनुभव

□ 21 दिसंबर 2021 से अब तक

डीएसटी-एसईआरबी रामानुजन फेलो

अंतरिक्ष भौतिकी प्रयोगशाला, विक्रम साराभाई अंतरिक्ष केंद्र, तिरुवनंतपुरम, भारत

□ 1 अप्रैल 2019 से 11 नवंबर 2021

पोस्टडॉक्टरल रिसर्च फेलो

उन्नत अध्ययन के लिए चुबू संस्थान, चुबू विश्वविद्यालय, कासुगई, जापान

□ 1 अप्रैल 2017 से 31 मार्च 2019

JSPS Pathway पोस्टडॉक्टरल रिसर्च फेलो

उन्नत अध्ययन के लिए चुबू संस्थान, चुबू विश्वविद्यालय, कासुगई, जापान

□ 1 सितंबर 2016 से 31 मार्च 2017 तक

पोस्टडॉक्टरल रिसर्च फेलो

उन्नत अध्ययन के लिए चुबू संस्थान, चुबू विश्वविद्यालय, कासुगई, जापान

□ 1 सितंबर 2014 से 31 अगस्त 2016 तक

JSPS स्टैंडर्ड पोस्टडॉक्टरल रिसर्च फेलो

उन्नत अध्ययन के लिए चुबू संस्थान, चुबू विश्वविद्यालय, कासुगई, जापान

□ 1 जुलाई 2013 से 31 अगस्त 2014

पोस्टडॉक्टरल रिसर्च फेलो

निम्न तापमान विज्ञान संस्थान, होक्काइडो विश्वविद्यालय, साप्पोरो, जापान

□ 8 जनवरी 2013 से 31 मई 2013 तक

व्याख्याता, रसायन विज्ञान विभाग, राष्ट्रीय प्रौद्योगिकी संस्थान, रायपुर, भारत

3. अनुसंधान के वर्तमान क्षेत्र

- प्रत्यक्ष एरोसोल विकिरणकारी बल पर प्रकाश-अवशोषित कार्बोनेसियस एरोसोल के परिमाण की जांच।
- वायुमंडलीय एरोसोल कणों से जुड़े प्राथमिक और माध्यमिक कार्बनिक और अकार्बनिक ट्रेसर यौगिकों के स्रोतों, गठन प्रक्रियाओं और जलवायु प्रभाव का आकलन।
- खनिज धूल और समुद्री नमक व्युत्पन्न एरोसोल कणों में पानी में घुलनशील कार्बनिक यौगिकों के जलीय-चरण गठन प्रक्रियाओं की जांच।
- वायुमंडलीय एरोसोल के कार्बन और नाइट्रोजन समस्थानिक हस्ताक्षर का कार्बोनेसियस और नाइट्रोजन यौगिकों के स्रोतों और गठन मार्गों का आकलन।
- वायुमंडलीय कणों में मौजूद पॉलीसाइक्लिक एरोमैटिक हाइड्रोकार्बन और धातुओं का स्वास्थ्य में प्रभाव की जांच।

4. इन्स्ट्रुमेंटल और मॉडल कौशल

- एरोसोल पार्टिकल सैम्पलर: हाई और मिडिल वॉल्यूम इंपैक्टर
- आयन क्रोमैटोग्राफ
- कार्बनिक कार्बन और मौलिक कार्बन विश्लेषक
- कुल कार्बन और कुल नाइट्रोजन विश्लेषक
- पानी में घुलनशील कार्बनिक कार्बन और कुल नाइट्रोजन विश्लेषक
- मौलिक विश्लेषक-समस्थानिक अनुपात-मास स्पेक्ट्रोमीटर
- गैस क्रोमैटोग्राफ-लौ आयनीकरण डिटेक्टर
- गैस क्रोमैटोग्राफ-मास स्पेक्ट्रोमीटर
- हाइब्रिड सिंगल-पार्टिकल लैंग्वेजियन इंटीग्रेटेड ट्रेजेक्टरी मॉडल
- प्रिसिपल कंपोनेंट एनालिसिस एंड पॉजिटिव मैट्रिक्स फैक्टराइजेशन मॉडल
- ISORROPIA-II थर्मोडायनामिक संतुलन मॉडल

5. पुरस्कार और फैलोशिप

- विज्ञान और इंजीनियरिंग अनुसंधान बोर्ड (एसईआरबी), विज्ञान और प्रौद्योगिकी विभाग (डीएसटी), भारत सरकार के एक सांविधिक निकाय से **रामानुजन फेलोशिप पुरस्कार**, 21 दिसंबर 2021 से 20 दिसंबर 2026 तक पांच साल के लिए।
- 27 अगस्त से 1 सितंबर 2017 तक स्विट्जरलैंड के ज्यूरिख में आयोजित यूरोपीय एरोसोल सम्मेलन (ईएसी) में **सर्वश्रेष्ठ पोस्टर प्रस्तुति पुरस्कार**।
- **JSPS Pathway पोस्टडॉक्टोरल फेलोशिप अवार्ड**, जापान सोसाइटी फॉर द प्रमोशन ऑफ साइंस (JSPS), टोक्यो, जापान, अप्रैल 2017 से मार्च 2019 तक दो वर्षों के लिए।
- **JSPS Standard पोस्टडॉक्टोरल फेलोशिप अवार्ड** जापान सोसाइटी फॉर द प्रमोशन ऑफ साइंस (JSPS), टोक्यो, जापान, सितंबर 2014 से अगस्त 2016 तक दो वर्षों के लिए।
- **रिसर्च फेलोशिप अवार्ड**, पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर, भारत, सितंबर 2009 से अगस्त 2012 तक तीन वर्षों के लिए।
- 29 अगस्त से 3 सितंबर 2010 तक हेलसिंकी, फिनलैंड में आयोजित अंतर्राष्ट्रीय एरोसोल सम्मेलन (आईएसी) में एक शोध पत्र प्रस्तुत करने के लिए हेलसिंकी विश्वविद्यालय, हेलसिंकी, फिनलैंड से **पूर्ण यात्रा अनुदान सहायता**।

6. वैज्ञानिक संघ के सदस्य

- आजीवन सदस्य: यूरोपीय भूविज्ञान संघ
- आजीवन सदस्य: ताइवान एसोसिएशन फॉर एरोसोल रिसर्च
- आजीवन सदस्य: रिसर्च केमिकल सोसाइटी ऑफ इंडिया
- आजीवन सदस्य: भारतीय विज्ञान कांग्रेस एसोसिएशन
- आजीवन सदस्य: इंडियन केमिकल सोसाइटी
- आजीवन सदस्य: भारतीय रसायनज्ञ परिषद

7. विदेश यात्रा

Japan: जुलाई 2013 से 11 नवंबर 2021 तक होक्काइडो विश्वविद्यालय, साप्पोरो और चुबू विश्वविद्यालय, कसुगई में पोस्टडॉक्टोरल शोध

Switzerland: 27 अगस्त से 1 सितंबर 2017 तक ज्यूरिख में आयोजित यूरोपीय एरोसोल सम्मेलन (ईएसी) में एक शोध पत्र की प्रस्तुति

Austria: 16 से 23 अप्रैल 2016 तक वियना में आयोजित यूरोपीय भूविज्ञान संघ (ईजीयू) महासभा में एक शोध पत्र की प्रस्तुति

USA: 13 से 19 दिसंबर 2015 तक सैन फ्रांसिस्को में आयोजित अमेरिकन जियोफिजिकल यूनियन (AGU) फॉल मीटिंग में एक शोध पत्र की प्रस्तुति, 12 से 17 अगस्त 2018 तक बोस्टन में आयोजित गोल्डस्चिमिट सम्मेलन में एक शोध पत्र की प्रस्तुति

Finland: 27 अगस्त से 4 सितंबर 2010 तक हेलसिंकी में आयोजित अंतर्राष्ट्रीय एरोसोल सम्मेलन (आईएसी) में एक शोध पत्र की प्रस्तुति

8. अंतर्राष्ट्रीय जर्नल के समीक्षक और अतिथि संपादक

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- वायुमंडल © एमडीपीआई: वायुमंडल में मानवजनित व्युत्पन्न कार्बनिक एरोसोल पर विशेष अंक के अतिथि संपादक

9. प्रकाशन की सूची

ए. पीयर-रिव्यूड इंटरनेशनल और नेशनल जर्नल में प्रकाशित शोध पत्र

1. Y. Deng, H. Fujinari, H. Yai, L. Shimada, Y. Miyazaki, E. Tachibana, **Dhananjay Kumar Deshmukh**, K. Kawamura, Y. Nakayama, S. Tatsuta, M. Cai, H. Xu, F. Li, S. Ohata, Y. Kondo, A. Takami, S. Hatakeyama, M. Mochida, Offline analysis of the chemical composition and hygroscopicity of sub-micrometer aerosol at an Asian outflow receptor site and comparison with online measurements, **Atmospheric Chemistry and Physics**, 2022, DOI:10.5194/acp-2021-704.
2. P. Bikkina, S. Bikkina, K. Kawamura, V.V.S.S. Sharma, **Dhananjay Kumar Deshmukh**, Unraveling the sources of atmospheric organic aerosols over the Arabian Sea: Insights from the stable carbon and nitrogen isotopic composition, **Science of The Total Environment**, 827, 154260, 2022.
3. M.M. Haque, K. Kawamura, **Dhananjay Kumar Deshmukh**, B. Kunwar, Y. Kim, Biomass burning is an important source of organic aerosols in interior Alaska, **Journal of Geophysical Research: Atmospheres**, 126, 2021, DOI:10.1029/2021JD034586.
4. S.K. Verma, K. Kawamura, **Dhananjay Kumar Deshmukh**, M.M. Haque, C.M. Pavuluri, Seasonal characteristics of biogenic secondary organic aerosols over Chichijima Island in the western North Pacific: Impact of biomass burning activity in East Asia, **Journal of Geophysical Research: Atmospheres**, 126, 2021, DOI:10.1029/2020JD032987.
5. M.M. Haque, S.K. Verma, **Dhananjay Kumar Deshmukh**, B. Kunwar, Y. Miyazaki, K. Kawamura, Seasonal and temporal variations of ambient aerosols in a deciduous broadleaf forest from northern Japan: Contributions of biomass burning and biological particles, **Chemosphere**, 279, 130540, 2021.
6. R. Zhou, J. Chen, L. Ren, Y. Deng, P. Vodicka, **Dhananjay Kumar Deshmukh**, K. Kawamura, P. Fu, M. Mochida, Distinctive sources govern organic aerosol fractions with different degree of oxygenation in the urban atmosphere, **Environmental Science & Technology**, 55, 4494-4502, 2021.
7. **Dhananjay Kumar Deshmukh**, K. Kawamura, T. Gupta, M.M. Haque, Y.L. Zhang, D.K. Singh, Y.I. Tsai, High loadings of water-soluble oxalic acid and related compounds in PM_{2.5} aerosols in eastern central India: Influence of biomass burning and photochemical processing, **Aerosol and Air Quality Research**, 19, 2625-2644, 2019.
8. **Dhananjay Kumar Deshmukh**, M.M. Haque, Y. Kim, K. Kawamura, Organic tracers of fine aerosol particles in central Alaska: Summertime composition and sources, **Atmospheric Chemistry and Physics**, 19, 14009-14029, 2019.
9. M.M. Haque, K. Kawamura, **Dhananjay Kumar Deshmukh**, F. Cao, W. Song, B. Mengying, Y.L. Zhang, Characterization of organic aerosols from a Chinese Mega-City during winter: Predominance of fossil fuel combustion, **Atmospheric Chemistry and Physics**, 19, 5147-5164, 2019.

10. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S. Pervez, Characteristics of aerosol during major biomass burning events over eastern central India in winter: A tracer-based approach, **Atmospheric Pollution Research**, 10, 817-826, 2019.
11. **Dhananjay Kumar Deshmukh***, M.M. Haque, K. Kawamura, Y. Kim, Dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in fine aerosols over central Alaska: Implications for sources and atmospheric processes, **Atmospheric Research**, 202, 128-139, 2018.
12. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.K. Deb, S.K.R. Boreddy, Sources and formation processes of water-soluble dicarboxylic acids, ω -oxocarboxylic acids, α -dicarbonyls, and major ions in summer aerosols from eastern central India, **Journal of Geophysical Research: Atmospheres**, 122, 3630-3652, 2017.
13. **Dhananjay Kumar Deshmukh**, K. Kawamura, M. Lazaar, B. Kunwar, S.K.R. Boreddy, Dicarboxylic acids, oxoacids, benzoic acid, α -dicarbonyls, WSOC, OC, and ions in spring aerosols from Okinawa Island in the western North Pacific rim: Size distributions and formation processes, **Atmospheric Chemistry and Physics**, 16, 5263-5282, 2016.
14. **Dhananjay Kumar Deshmukh***, K. Kawamura, M.K. Deb, Dicarboxylic acids, ω -oxocarboxylic acids, α -dicarbonyls, WSOC, OC, EC, and ions in wintertime size-segregated aerosols from central India: sources and formation processes, **Chemosphere**, 161, 27-42, 2016.
15. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, S. Chandrawanshi, S. Tiwari, Seasonal size distribution and possible health implications of atmospheric aerosols collected from a rural site of eastern central India, **Atmospheric Pollution Research**, 7, 278-287, 2016.
16. J. Nirmalkar, **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, K. Sopajaree, Mass loading and episodic variation of molecular markers in PM_{2.5} aerosols over a rural area in eastern central India, **Atmospheric Environment**, 117, 41-50, 2015.
17. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, Arabitol and mannitol as tracers from fungal contribution to size-differentiated particulate matter of rural atmospheric aerosols, **International Journal of Environmental Science and Development**, 6, 460-463, 2015.
18. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, Removal of phenol in aqueous solution by adsorption onto green synthesized coinage nanoparticles beads, **Research on Chemical Intermediates**, 41, 8363-8379, 2015.
19. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, Y.I. Tsai, S.K. Verma, Molecular markers in ambient aerosol in the Mahanadi Riverside Basin of eastern central India during winter, **Environmental Science and Pollution Research**, 22, 1220-1231, 2015.
20. C. Verma, **Dhananjay Kumar Deshmukh**, The ambient air and noise quality in India during diwali festival: a review, **Recent Research in Science and Technology**, 6, 203-210, 2014.
21. B.K. Sen, **Dhananjay Kumar Deshmukh***, M.K. Deb, D. Verma, J. Pal, Removal of phenolic compounds from aqueous phase by adsorption onto polymer supported iron nanoparticles, **Bulletin of Environmental Contamination and Toxicology**, 93, 549-554, 2014.

22. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, Microwave-assisted synthesis of silver nanoparticles using benzo-18-crown-6 as reducing and stabilizing agent, **Applied Nanoscience**, 4, 507-510, 2014.
23. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, B.K. Sen, Microwave-assisted synthesis of platinum nanoparticles and their catalytic degradation of methyl violet in aqueous solution, **Applied Nanoscience**, 4, 61-65, 2014.
24. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y. Suzuki, G.N. Kouvarakis, Water-soluble ionic composition of PM_{2.5-10} and PM_{2.5} aerosols in the lower troposphere of an industrial city Raipur, the eastern central India, **Air Quality, Atmosphere & Health**, 6, 95-110, 2013.
25. **Dhananjay Kumar Deshmukh**, M.K. Deb, S.L. Mkoma, Size distribution and seasonal variation of size-Segregated particulate matter in the ambient air of Raipur city, India, **Air Quality, Atmosphere & Health**, 6, 259-276, 2013.
26. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, Seasonal air quality profile of size-segregated aerosols in the ambient air of central India region, **Bulletin of Environmental Contamination and Toxicology**, 91, 704-710, 2013.
27. J. Nirmalkar, M.K. Deb, **Dhananjay Kumar Deshmukh**, S.K. Verma. Mass loading of size-segregated atmospheric aerosols in the ambient air during fireworks episodes in eastern central India, **Bulletin of Environmental Contamination and Toxicology**, 90, 434-439, 2013.
28. J. Pal, M.K. Deb, **Dhananjay Kumar Deshmukh**, D. Verma, Removal of methyl orange by activated carbon modified by silver nanoparticles, **Applied Water Science**, 3, 367-374, 2013.
29. **Dhananjay Kumar Deshmukh**, M.K. Deb, P.K. Hopke, Y.I. Tsai, Seasonal characteristics of water-soluble dicarboxylates associated with PM₁₀ in the urban atmosphere of Durg city, India, **Aerosol and Air Quality Research**, 12, 683-696, 2012.
30. **Dhananjay Kumar Deshmukh**, Y.I. Tsai, M.K. Deb, S.L. Mkoma, Characterization of dicarboxylates and inorganic ions in urban PM₁₀ aerosols in the eastern central India, **Aerosol and Air Quality Research**, 12, 592-607, 2012.
31. **Dhananjay Kumar Deshmukh***, Y.I. Tsai, M.K. Deb, P. Zampas, Characteristics and sources of water-soluble ionic species associated with PM₁₀ particles in the ambient air of central India, **Bulletin of Environmental Contamination and Toxicology**, 89, 1091-1097, 2012.
32. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, S.K. Verma, J. Nirmalkar, Aerosol size distribution and seasonal variation in an urban area of an industrial city in central India, **Bulletin of Environmental Contamination and Toxicology**, 89, 1098-1104, 2012.
33. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S.L. Mkoma, Water soluble ions in PM_{2.5} and PM₁ aerosols in Durg city, Chhattisgarh, India, **Aerosol and Air Quality Research**, 11, 696-708, 2011.
34. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, S.L. Mkoma, Atmospheric ionic species in PM_{2.5} and PM₁ aerosols in the ambient air of eastern central India, **Journal of Atmospheric Chemistry**, 66, 81-100, 2010.

35. **Dhananjay Kumar Deshmukh**, M.K. Deb, S.K. Verma, Distribution patterns of coarse, fine and ultrafine atmospheric aerosol particulate matters in major cities of Chhattisgarh, **Indian Journal of Environmental Protection**, 30, 184-197, 2010.

बी. अंतर्राष्ट्रीय और राष्ट्रीय सम्मेलन की कार्यवाही में प्रकाशित शोध पत्र

1. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.K. Deb, Sources and formation pathways of water-soluble dicarboxylic acids in urban aerosols collected from eastern central India, **Indian Aerosol Science and Technology Association**, 22, 53-57, 2016.
2. **Dhananjay Kumar Deshmukh**, M.K. Deb, J. Pal, Water-soluble ionic composition of fine and coarse aerosols in the ambient air of central India, **Indian Aerosol Science and Technology Association**, 21, 67-71, 2016.
3. **Dhananjay Kumar Deshmukh**, M.K. Deb, Y.I. Tsai, B.K. Sen, Molecular characterization of dicarboxylate species in submicron (PM₁) aerosols in central India, **Indian Aerosol Science and Technology Association**, 20, 9-13, 2012.
4. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, S.K. Verma, Assessment of ambient air quality through the air quality index and exceedance factor for the city of Durg, Chhattisgarh, **Recent Trends in Chemistry**, 44-50, 2012.
5. **Dhananjay Kumar Deshmukh**, M.K. Deb, Atmospheric particulate pollutants and their relationship with meteorology in urban area of Raipur, India, **Advances in Environmental Chemistry**, 59-62, 2011.
6. S.K. Verma, **Dhananjay Kumar Deshmukh**, M.K. Deb, Characteristics of aerosols over suburban site of eastern central region in India, **Advances in Environmental Chemistry**, 51-54, 2011.
7. D. Verma, **Dhananjay Kumar Deshmukh**, S.K. Verma, M.K. Deb, The study of ambient coarse and fine aerosols at suburban location in Chhattisgarh state, **Advances in Environmental Chemistry**, 208-211, 2011.
8. **Dhananjay Kumar Deshmukh**, M.K. Deb, The ion chemistry, seasonal cycle and sources of PM_{2.1-10} and PM_{2.1} aerosols in industrial city Korba, **Indian Aerosol Science and Technology Association**, 19, 590-598, 2010.

सी. भारत और विदेशों में अंतर्राष्ट्रीय और राष्ट्रीय सम्मेलन में प्रस्तुत शोध पत्र

1. **Dhananjay Kumar Deshmukh**, B. Ramya, S.K.R. Boreddy, P. Hegde, S.S. Babu, What drives the prevalence of atmospheric water-soluble organic aerosols over the tropical hill station in the Western Ghats? **21st National Space Science Symposium (NSSS)**, IISER Kolkata, India, 31 January to 4 February 2022.

2. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.K. Deb, Enhanced aqueous-phase formation of secondary organic aerosols on the surface of mineral dust particles, **An International Conference on Recent Trends in Renewable Energy and Sustainable Development, Raipur, India**, 30 and 31 January 2020.
3. **Dhananjay Kumar Deshmukh**, A.K. Singh, K. Kawamura, Y.I. Tsai, S.K. Verma, Water-soluble diacids and related compounds in PM_{2.5} aerosols in eastern central India: influence of biomass burning and atmospheric processing, **International Global Atmospheric Chemistry (IGAC) Conference, Takamatsu, Japan**, 25 to 29 September 2018.
4. **Dhananjay Kumar Deshmukh**, K. Kawamura, E. Tachibana, Stable carbon and nitrogen isotopic compositions of atmospheric aerosols from Chichijima Island in the western North Pacific, **Goldschmidt Conference, Boston, United States of America**, 12 to 17 August 2018.
5. **Dhananjay Kumar Deshmukh**, D.K. Singh, Water-soluble organic compounds in the tropical aerosols from Indian region: Implications for sources and formation processes, **All India Conference on Disruptive Technologies, Durg, India**, 20 and 21 April 2018.
6. **Dhananjay Kumar Deshmukh**, K. Kawamura, M.M. Haque, Y. Kim, Water-soluble dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in atmospheric aerosols during summer in central Alaska: An influence of biomass burning and biogenic sources, **European Aerosol Conference (EAC), Zurich, Switzerland**, 27 August to 1 September 2017.
7. **Dhananjay Kumar Deshmukh**, M.M. Haque, K. Kawamura, Y. Kim, Dicarboxylic acids, oxocarboxylic acids and α -dicarbonyls in fine aerosols in the atmosphere of central Alaska: sources and atmospheric processes, **UGC-SAP (DRS-II) National Conference on Advances in Environmental and Chemical Sciences, Raipur, India**, 17 and 18 March 2017.
8. **Dhananjay Kumar Deshmukh**, K. Kawamura, M. Kobayashi, D. Gowda, Water-soluble dicarboxylic acids and ω -oxocarboxylic acids in size-segregated aerosols over northern Japan during spring: Sources and formation processes, **European Geoscience Union (EGU) General Assembly, Vienna, Austria**, 17 to 22 April 2016.
9. **Dhananjay Kumar Deshmukh**, K. Kawamura, M. Lazaar, B. Kunwar, S.K.R. Boreddy, Size distributions and formation pathways of organic and inorganic constituents in spring aerosols from Okinawa Island in the western North Pacific rim: An outflow region of Asian dusts, **American Geophysical Union (AGU) Fall Meeting, San Francisco, United States of America**, 14 to 18 December 2015.
10. **Dhananjay Kumar Deshmukh**, K. Kawamura, S.K.R. Boreddy, Water-soluble dicarboxylic acids and major ions in size-resolved aerosols at an urban site in India during summer: Size distribution and sources, **The 33th Symposium of the Japanese Association of Organic Geochemists, Sapporo, Japan**, 5 to 7 August 2015.
11. **Dhananjay Kumar Deshmukh**, K. Kawamura, Molecular distribution of water-soluble dicarboxylic acids and related compounds in size-segregated aerosols from eastern central India, **11th Asia Oceania Geoscience Society (AOGS), Sapporo, Japan**, 28 July to 01 August 2014.

12. **Dhananjay Kumar Deshmukh**, M.K. Deb, Chemical composition and source identification of PM₁₀ and PM_{2.5} aerosols in the ambient air of central India, **National Seminar on Environmental Protection and Sustainable Development, Raipur, India**, 16 February 2013.
13. **Dhananjay Kumar Deshmukh**, M.K. Deb, D. Verma, Removal of nitrate from sample matrix by carboxymethyl cellulose (CMC) stabilized by zerovalent iron (ZVFe) nanoparticles for determination of ammonia by fourier-transform infrared spectroscopy, **Shaastrarth: An International Conference, Bhilai, India**, 8 to 9 February 2013.
14. **Dhananjay Kumar Deshmukh**, M.K. Deb, Particulate air pollution in the two urban areas of eastern central region of India, **The 11th Asian Urbanization Conference, Hyderabad, India**, 10 to 13 December 2011.
15. **Dhananjay Kumar Deshmukh**, M.K. Deb, Distribution and temporal behavior of airborne particulate matters (PM₁₀, PM_{2.5-10}, PM_{2.5} and PM₁) in Durg city, Chhattisgarh, India, **4th International Congress of Environmental Research (ICER), Surat, India**, 15 to 17 December 2011.
16. **Dhananjay Kumar Deshmukh**, M.K. Deb, Atmospheric particulate pollutants and their relationship with meteorology in urban area of Raipur, India, **International Conference on Advances in Environmental Chemistry, Aizawl, India**, 16 to 18 November 2011.
17. **Dhananjay Kumar Deshmukh**, M.K. Deb, Measurement of particulate matter concentrations in the atmosphere of central India and its statistical analysis, **National Seminar on Recent Trends in Chemical Sciences and Future Prospects, Durg, India**, 11 and 12 October 2011.
18. **Dhananjay Kumar Deshmukh**, Study on the seasonal variation and source identification of PM₁₀, PM_{2.5} and PM_{0.7} size fractions with reference to ionic species in Raipur, Chhattisgarh, **9th Chhattisgarh Young Scientist Congress, Jagdalpur, India**, 29 February to 1 March 2011.
19. **Dhananjay Kumar Deshmukh**, M.K. Deb, Characterization of dicarboxylic acids in atmospheric particles, **98th Indian Science Congress, Chennai, India**, 3 to 7 January 2011.
20. **Dhananjay Kumar Deshmukh**, M.K. Deb, Characterization of dicarboxylic acids in PM_{2.5-10} and PM_{2.5} atmospheric aerosols, **47th Annual Convention of Chemists and International Conference in Recent advances in Chemical Sciences, Raipur, India**, 23 to 27 December 2010.
21. **Dhananjay Kumar Deshmukh**, M.K. Deb, Mass concentration, seasonal variation and sources of water-soluble inorganic species in size-segregated aerosol in lower troposphere of eastern central India, **International Aerosol conference (IAC), Helsinki, Finland**, 29 August to 3 September 2010.
22. **Dhananjay Kumar Deshmukh**, M.K. Deb, The ion chemistry, seasonal cycle and sources of PM_{2.1-10} and PM_{2.1} aerosols in industrial city Korba, **Indian Aerosol Science and Technology Association (IASTA), Darjeeling, India**, 24 to 26 March 2010.

डी. भारत और विदेशों में अंतर्राष्ट्रीय और राष्ट्रीय संगोष्ठी और कार्यशाला में भागीदारी

1. The international symposium on **“Frontier of Atmospheric Aerosol Studies: Towards the Understanding of the Health and Climate Effects”**, Nagoya University, Nagoya, Japan, 23 and 24 January 2018.
2. The national conference of **“49th Annual Convention of Chemists”**, Bhopal, India, 12 to 15 December 2012.
3. The international symposium on **“Environmental Analysis and Toxicological Issue of Speciation in Atmospheric Organic Aerosols”**, Pt. Ravishankar Shukla University, Raipur, India, 6 and 7 December 2012.
4. Workshop on **“Prospection and Sustainable Use of Medicinal Plants of Chhattisgarh”**, Pt. Ravishankar Shukla University, Raipur, India, 10 and 11 September 2012.
5. UGC sponsored workshop on **“How to Participation in International and National Conferences and Workshops and Training Courses”**, Pt. Ravishankar Shukla University, Raipur, India, 24 February to 2 March 2012.
6. The national Conference on **“Emerging Trends in Science, Technology and Management”**, Kruti Institute of Technology and Engineering, Raipur, India, 4 February 2012.
7. The national conference of **“99th Session of the Indian Science Congress”**, KIIT University, Bhubaneswar, India, 3 to 7 January 2012.
8. The international symposium on **“Novel Approaches to Air Quality Management and Improvement in India”**, Pt. Ravishankar Shukla University, Raipur, India, 5 to 7 September 2011.
9. Workshop on **“Role of Woman in Management of Water Resources”**, organized by Central Water Board Bhopal, Govt. V.Y.T. PG. Autonomous College, Durg, India, 4 March 2009.
10. Workshop on **“Foundation of Chemistry”**, organized by IAS Bangalore, INSA New Delhi and NAH Allahabad, Govt. V.Y.T. PG. Autonomous College, Durg, India, 7 to 9 March 2008.