

प्रशांत हेगडे

वैज्ञानिक/इंजिनियर एसएफ

अंतरिक्ष भौतिकी प्रयोगशाला

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**विशेषज्ञता का क्षेत्र:** विश्लेषणात्मक रसायन विज्ञान

**अनुसंधान रुचि:** एरोसोल रासायनिक संरचना अध्ययन

**शैक्षणिक योग्यता:** एम. एससी. पीएच.डी. (वायुमंडलीय विज्ञान)

**व्यावसायिक उत्तरदायित्व:** एरोसोल रासायनिक लक्षण वर्णन (प्रमुख आयन और ट्रेस तत्व) और विभिन्न विश्लेषणात्मक उपकरणों/तकनीकों का उपयोग करके आणविक स्तर के जीवों के निर्धारण पर अनुसंधान गतिविधियों को सौंपा।

## प्रकाशन

- (1) Boreddy, S. K. R., **Prashant Hegde**, and Aswini, A. R. Aryasree, S., (2021) Chemical characteristics, size distributions, molecular composition and Brown carbon in south Asian outflow to the Indian Ocean, **Earth and Space Science**. DOI: 10.1029/2020EA001615 .
- (2) Arun, B. S., Mukunda M. Gogoi, **Prashant Hegde**, Arup Borgohain, Suresh K. R. Boreddy, Shyam Sundar Kundu, and S. Suresh Babu (2021) Carbonaceous Aerosols over Lachung in the Eastern Himalayas: Primary Sources and Secondary Formation of Organic Aerosols in a Remote High-Altitude Environment, **ACS Earth and Space Chemistry**, <https://doi.org/10.1021/acsearthspacechem.1c00190>.
- (3) Arun, B.S., Mukunda M. Gogoi, Arup Borgohain, **Prashant Hegde**, Shyam Sundar Kundu, S. Suresh Babu (2021) Role of sulphate and carbonaceous aerosols on the radiative effects of aerosols over a remote high-altitude site Lachung in the Eastern Himalayas, **Atmospheric Research**, 263 105799 <https://doi.org/10.1016/j.atmosres.2021.105799>.
- (4) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R., Williams, M. A., Elavarasi, R., and Kumar T. V. L. (2021). Seasonal variations in characteristics, sources and diurnal patterns of carbonaceous and water-soluble constituents in urban aerosols from the east coast of tropical India, **Environmental Chemistry**, <https://doi.org/10.1071/EN21017>.
- (5) Gogoi, Mukunda M., Santosh K Pandey, Arun B S, Vijayakumar S Nair, Roseline C Thakur, Jai Prakash Chaubey, Anoop Tiwari, Manoj M R, Sobhan Kumar Kompalli, Aditya Vaishya, Prijith S S., **Prashant Hegde**, and Babu S.S., (2021). Long-term changes in aerosol radiative properties over Ny-Ålesund: Results from Indian scientific expeditions to the Arctic, **Polar Science**, doi: 10.1016/j.polar.2021.100700.
- (6) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R. (2021) Chemical characteristics, size distributions, and aerosol liquid water in size-resolved coastal urban aerosols allied with distinct air masses over tropical peninsular India. **ACS Earth and Space Chemistry**, 5, 3, 457–473, <https://doi.org/10.1021/acsearthspacechem.0c00282>.
- (7) Aswini, A.R., **Prashant Hegde** (2020) Impact assessment of continental and marine air-mass on size-resolved aerosol chemical composition over coastal atmosphere: Significant organic contribution in coarse mode fraction, **Atmospheric Research**, 248, 105216, <https://doi.org/10.1016/j.atmosres.2020.105216>

- (8) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R. (2020) Geochemical characteristics of trace elements in size-resolved coastal urban aerosols associated with distinct air masses over tropical peninsular India: size distributions and source apportionment. **Science of the Total Environment**, <https://doi.org/10.1016/j.scitotenv.2020.142967>
- (9) Aryasree, S., Nair, P.R. and **Prashant Hegde** (2020) Radiative characteristics of near-surface aerosols at a tropical site: An estimation based on concurrent measurements of their physico-chemical characteristics. **Journal of Earth System Science**, 129, 185, <https://doi.org/10.1007/s12040-020-01444-7>.
- (10) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R., Girach, I. A, Koushik, N., and Nalini K. (2020) Impact of ice-free oases on particulate matter over the East Antarctic: inferences from the carbonaceous, water-soluble species and trace metals, **Polar Science**, 24, 100520, <https://doi.org/10.1016/j.polar.2020.100520>.
- (11) Aswini, A. R., **Prashant Hegde**, Aryasree, S., Girach I. A. and Nair P. R. (2019) Continental outflow of anthropogenic aerosols over Arabian Sea and Indian Ocean during wintertime: ICARB-2018 campaign, **Science of the Total Environment**, <https://doi.org/10.1016/j.scitotenv.2019>.
- (12) Arun, B. S, Aswini, A. R, Gogoi, M. M., **Prashant Hegde**, Kompalli, S. K., Sharma P., and S Suresh Babu (2019) Physico-chemical and optical properties of aerosols at a background site (~ 4 km a.s.l.) in the western Himalayas, **Atmospheric Environment**. [doi.org/10.1016/j.atmosenv.2019.117017](https://doi.org/10.1016/j.atmosenv.2019.117017).
- (13) **Prashant Hegde**, B, M, Vyas, A R Aswini, S Aryasree and P. R. Nair (2019) Carbonaceous aerosols over a semi-arid location in North West India: seasonal variations and source characteristics, **Journal of Arid Environments**, <https://doi.org/10.1016/j.jaridenv.2019.104018>.
- (14) Aswini, A R, **Prashant Hegde**, P. R. Nair and S Aryasree (2018) Seasonal trends in carbonaceous aerosols over a tropical coastal location in response to meteorological processes, **Science of the Total Environment**, 656, 1261–1279, <https://doi.org/10.1016/j.scitotenv.2018.11.366>.
- (15) Aswini, A.R., **Prashant Hegde**, and P. R. Nair, (2018) Carbonaceous and inorganic aerosols over a sub-urban site in peninsular India: Temporal variability and source characteristics **Atmospheric Research**, 199, 40-53. <http://dx.doi.org/10.1016/j.atmosres.2017.09.005>.
- (16) **Prashant Hegde**, and Kawamura, K. (2017) Chemical constituents of carbon and nitrogen aerosols over Thumba region. **Archives of Environmental Contamination and Toxicology**, 73, 3, 456-473. [doi: 10.1007/s00244-017-0426-5](https://doi.org/10.1007/s00244-017-0426-5).
- (17) Bindu G., P. R. Nair, S. Aryasree, **Prashant Hegde**, and S. Jacob, (2016) Pattern of aerosol mass loading and chemical composition over the atmospheric environment of an urban coastal station, **Journal of Atmospheric and Solar-Terrestrial Physics**, 121-135.
- (18) **Prashant Hegde**, K. Kawamura, I. A. Girach and P. R. Nair, (2015) Characterisation of water- soluble organic aerosols at a site on the southwest coast of India, **Journal of Atmospheric Chemistry**, 73, 181-205.
- (19) **Prashant Hegde**, K. Kawamura, H. Joshi and M. Naja, (2015) Organic and inorganic components of aerosols over the central Himalayas: Winter and summer variations in stable carbon and nitrogen isotopic composition, **Environmental Science and Pollution Research**, 23, 6102-6118.
- (20) **Prashant Hegde**, and K. Kawamura (2012) Seasonal variations of water-soluble organic carbon, dicarboxylic acids, ketocarboxylic acids, and  $\alpha$ -dicarbonyls in Central Himalayan aerosols. **Atmospheric Chemistry and Physics**, 12, 1–21, [doi:10.5194/acp-12-1-2012](https://doi.org/10.5194/acp-12-1-2012).
- (21) Girach, I. A., P. R. Nair, L. M. David, **Prashant Hegde**, M. K. Mishra, G. M. Kumar, S. M. Das, N. Ojha, and M. Naja (2011) The changes in near-surface ozone and precursors at two nearby tropical sites during annular solar eclipse of 15 January 2010, **Journal of Geophysical Research**, 117, D01303, [doi:10.1029/2011JD016521](https://doi.org/10.1029/2011JD016521).

- (22) Kumar, R., M. Naja, S. K. Satheesh, N. Ojha, H. Joshi, T. Sarangi, P. Pant, U. C. Dumka, **Prashant Hegde**, and S. Venkataramani (2011) Influences of the springtime northern Indian biomass burning over the central Himalayas, **Journal of Geophysical Research**, 116, D19302, doi:10.1029/2010JD015509.
- (23) Srivastava, A. K., P. Pant, **Prashant Hegde**, Sachchidanand Singh, U. C. Dumka, Manish Naja, Narendra Singh and Y. Bhavanikumar (2011) The influence of a south Asian dust storm on aerosol radiative forcing at a high-altitude station in central Himalayas, **International Journal of Remote Sensing**, 1-19, doi:10.1080/01431161.2010.531781.
- (24) Srivastava, A K, K Ram, P Pant, **Prashant Hegde** and Hema Joshi (2011) Black carbon aerosols over Manora Peak in the Indian Himalayan foothills: implications for climate forcing, **Environmental Research Letters**, 1-8, 7014002, doi:10.1088/1748-9326/7/1/014002.
- (25) Dumka, U. C, K. Krishna Moorthy, R, Kumar, **Prashant Hegde**, R, Sagar, P. Pant., N, Singh, and S, S, Babu, (2010) Characteristics of Aerosol Black Carbon Mass Concentration over a High Altitude location in the Central Himalayas from multi-year measurements **Atmospheric Research**, 96, 510–521.
- (26) Srivastava, A K, P Pant, U. C. Dumka, and **Prashant Hegde** (2010) Black Carbon Aerosol Characteristics and Its Radiative Impact over Nainital: A High-Altitude Station in the Central Himalayas, **Journal of the Institute of Engineering**, 8, 3, 1-10.
- (27) Ram, K., M. M. Sarin, and **Prashant Hegde** (2010) Long-term record of aerosol optical properties and chemical composition from a high-altitude site (Manora Peak) in Central Himalaya. **Atmospheric Chemistry and Physics**, 10, 11791-11803.
- (28) **Prashant Hegde**, Pant, P. and Kumar, Y. B. (2009) An integrated analysis of lidar observations in association with optical properties of aerosols from a high altitude location in central Himalayas, **Atmospheric Science Letters**, 10, 48–57.
- (29) **Prashant Hegde**, Major ionic composition of aerosol, rainwater and its impact on surface and sub-surface waters, in and around Mangalore, west coast of India. **Journal of Environmental Monitoring And Assessment** DOI 10.1007/s10661-006-9565-2 (2007).
- (30) **Prashant Hegde**, M.M. Sarin, A.K. Sudheer and B.R. Manjunatha, Characteristics of atmospheric aerosols over Mangalore region: southwest coast of India. **Atmospheric Environment** 41, 7751–7766 (2007).
- (31) **Prashant Hegde**, P. Pant, M. Naja, U. C. Dumka, Ram Sagar, Aerosol physical and optical properties during dust episode over Nainital. **Geophysical Research Letters** 34, L23802, doi:101029/2007GL030692 (2007).
- (32) P. Pant, **Prashant Hegde**, U. C. Dumka, R. Sagar, S. K. Satheesh, K. K. Moorthy, A. Saha, and M. K. Srivastava, Aerosol characteristics at a high-altitude location in central Himalayas: Optical properties and radiative forcing. **Journal of Geophysical Research**, 111, D17206, doi:10.1029/2005JD006768 (2006).
- (33) Dumka, U. C., S. K. Satheesh, P. Pant, **Prashant Hegde**, and K. Krishna Moorthy, Surface changes in solar irradiance due to aerosols over central Himalayas. **Geophysical Research Letters**, 33, L20809, doi: 10.1029/2006GL027814 (2006).
- (34) Srivastava, M. K., S. Singh, A. Saha, U. C. Dumka, **Prashant Hegde**, R. Singh, and P. Pant, Direct solar ultraviolet irradiance over Nainital, India, in the central Himalayas for clear-sky day conditions during December 2004. **Journal of Geophysical Research**, 111, D08201, doi:10.1029/2005JD006141 (2006).
- (35) P. Pant, **Prashant Hegde**, U. C. Dumka, Ram Sagar, S. K. Satheesh, K. Krishna Moorthy, Aerosol characteristics at a high altitude location during the ISRO-GBP Land Campaign-II. **Current Science**, 91, 8, 1053-1061 (2006).

- (36) **Prashant Hegde** and Manjunatha, B. R., Atmospheric deposition of H<sup>+</sup> and major ions around Mangalore, southwest coast of India. **Journal of Applied Geochemistry**, 5: 89-93 (2003).
- (37) Sreekumar, N.V., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Sarogini, B.K., Determination of nitrite by simple diazotization method. **Microchemical Journal (Elsevier)** 74:27-32 (2003).
- (38) Sreekumar, N.V., N.G. Bhat, Narayana, B., Nazareth, R., **Prashant Hegde** and Manjunatha, B.R., Selective complexometric determination of titanium (IV) using sodium potassium tartrate or ascorbic acid as masking agent. **Microchimica Acta** (Springer-Verlag) 141:29-33 (2003).
- (39) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Indirect complexometric determination of mercury (II) using potassium bromide as a selective masking agent. **Mikrochemica Acta** 140, 63-67 (2002).
- (40) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Indirect complexometric determination of thorium (IV) using sodium fluoride as a masking agent. **Mickochemica Acta** 140, 77-79 (2002).
- (41) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde** and Manjunatha, B.R., Indirect complexometric determination of thorium (IV) using 5-sulfosalicylic acid as a masking agent'. **Chemical Analysis** (Warsaw) 47: 1-6 (2002).

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**Research interest:** Aerosol chemical composition studies

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**Professional Responsibilities:** Assigned research activities on aerosol chemical characterization (major ions and trace elements) and determination of molecular level organics using different analytical instruments/techniques.

### Publications in Journals:

- (1) Boreddy, S. K. R., **Prashant Hegde**, and Aswini, A. R. Aryasree, S., (2021) Chemical characteristics, size distributions, molecular composition and Brown carbon in south Asian outflow to the Indian Ocean, **Earth and Space Science**. DOI: 10.1029/2020EA001615 .
- (2) Arun, B. S., Mukunda M. Gogoi, **Prashant Hegde**, Arup Borgohain, Suresh K. R. Boreddy, Shyam Sundar Kundu, and S. Suresh Babu (2021) Carbonaceous Aerosols over Lachung in the Eastern Himalayas: Primary Sources and Secondary Formation of Organic Aerosols in a Remote High-Altitude Environment, **ACS Earth and Space Chemistry**, <https://doi.org/10.1021/acsearthspacechem.1c00190>.
- (3) Arun, B.S., Mukunda M. Gogoi, Arup Borgohain, **Prashant Hegde**, Shyam Sundar Kundu, S. Suresh Babu (2021) Role of sulphate and carbonaceous aerosols on the radiative effects of aerosols over a remote high-altitude site Lachung in the Eastern Himalayas, **Atmospheric Research**, 263 105799 <https://doi.org/10.1016/j.atmosres.2021.105799>.
- (4) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R., Williams, M. A., Elavarasi, R., and Kumar T. V. L. (2021). Seasonal variations in characteristics, sources and diurnal patterns of carbonaceous and water-soluble constituents in urban aerosols from the east coast of tropical India, **Environmental Chemistry**, <https://doi.org/10.1071/EN21017>.
- (5) Gogoi, Mukunda M., Santosh K Pandey, Arun B S, Vijayakumar S Nair, Roseline C Thakur, Jai Prakash Chaubey, Anoop Tiwari, Manoj M R, Sobhan Kumar Kompalli, Aditya Vaishya, Prijith S S., **Prashant Hegde**, and Babu S.S., (2021). Long-term changes in aerosol radiative properties over Ny-Ålesund: Results from Indian scientific expeditions to the Arctic, **Polar Science**, doi: 10.1016/j.polar.2021.100700.
- (6) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R. (2021) Chemical characteristics, size distributions, and aerosol liquid water in size-resolved coastal urban aerosols allied with distinct air masses over tropical peninsular India. **ACS Earth and Space Chemistry**, 5, 3, 457–473, <https://doi.org/10.1021/acsearthspacechem.0c00282>.
- (7) Aswini, A.R., **Prashant Hegde** (2020) Impact assessment of continental and marine air-mass on size-resolved aerosol chemical composition over coastal atmosphere: Significant organic contribution in coarse mode fraction, **Atmospheric Research**, 248, 105216,

- (8) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R. (2020) Geochemical characteristics of trace elements in size-resolved coastal urban aerosols associated with distinct air masses over tropical peninsular India: size distributions and source apportionment. **Science of the Total Environment**, <https://doi.org/10.1016/j.scitotenv.2020.142967>
- (9) Aryasree, S., Nair, P.R. and **Prashant Hegde** (2020) Radiative characteristics of near-surface aerosols at a tropical site: An estimation based on concurrent measurements of their physico-chemical characteristics. **Journal of Earth System Science**, 129, 185, <https://doi.org/10.1007/s12040-020-01444-7>.
- (10) Boreddy, S. K. R., **Prashant Hegde**, Aswini, A. R., Girach, I. A., Koushik, N., and Nalini K. (2020) Impact of ice-free oases on particulate matter over the East Antarctic: inferences from the carbonaceous, water-soluble species and trace metals, **Polar Science**, 24, 100520, <https://doi.org/10.1016/j.polar.2020.100520>.
- (11) Aswini, A. R., **Prashant Hegde**, Aryasree, S., Girach I. A. and Nair P. R. (2019) Continental outflow of anthropogenic aerosols over Arabian Sea and Indian Ocean during wintertime: ICARB-2018 campaign, **Science of the Total Environment**, <https://doi.org/10.1016/j.scitotenv.2019>.
- (12) Arun, B. S, Aswini, A. R, Gogoi, M. M., **Prashant Hegde**, Kompalli, S. K., Sharma P., and S Suresh Babu (2019) Physico-chemical and optical properties of aerosols at a background site (~ 4 km a.s.l.) in the western Himalayas, **Atmospheric Environment**. [doi.org/10.1016/j.atmosenv.2019.117017](https://doi.org/10.1016/j.atmosenv.2019.117017).
- (13) **Prashant Hegde**, B, M, Vyas, A R Aswini, S Aryasree and P. R. Nair (2019) Carbonaceous aerosols over a semi-arid location in North West India: seasonal variations and source characteristics, **Journal of Arid Environments**, <https://doi.org/10.1016/j.jaridenv.2019.104018>.
- (14) Aswini, A R, **Prashant Hegde**, P. R. Nair and S Aryasree (2018) Seasonal trends in carbonaceous aerosols over a tropical coastal location in response to meteorological processes, **Science of the Total Environment**, 656, 1261–1279, <https://doi.org/10.1016/j.scitotenv.2018.11.366>.
- (15) Aswini, A.R., **Prashant Hegde**, and P. R. Nair, (2018) Carbonaceous and inorganic aerosols over a suburban site in peninsular India: Temporal variability and source characteristics **Atmospheric Research**, 199, 40-53. <http://dx.doi.org/10.1016/j.atmosres.2017.09.005>.
- (16) **Prashant Hegde**, and Kawamura, K. (2017) Chemical constituents of carbon and nitrogen aerosols over Thumba region. **Archives of Environmental Contamination and Toxicology**, 73, 3, 456-473. [doi: 10.1007/s00244-017-0426-5](https://doi.org/10.1007/s00244-017-0426-5).
- (17) Bindu G., P. R. Nair, S. Aryasree, **Prashant Hegde**, and S. Jacob, (2016) Pattern of aerosol mass loading and chemical composition over the atmospheric environment of an urban coastal station, **Journal of Atmospheric and Solar-Terrestrial Physics**, 121-135.
- (18) **Prashant Hegde**, K. Kawamura, I. A. Girach and P. R. Nair, (2015) Characterisation of water- soluble organic aerosols at a site on the southwest coast of India, **Journal of Atmospheric Chemistry**, 73, 181-205.
- (19) **Prashant Hegde**, K. Kawamura, H. Joshi and M. Naja, (2015) Organic and inorganic components of aerosols over the central Himalayas: Winter and summer variations in stable carbon and nitrogen isotopic composition, **Environmental Science and Pollution Research**, 23, 6102-6118.
- (20) **Prashant Hegde**, and K. Kawamura (2012) Seasonal variations of water-soluble organic carbon, dicarboxylic acids, ketocarboxylic acids, and  $\alpha$ -dicarbonyls in Central Himalayan aerosols. **Atmospheric Chemistry and Physics**, 12, 1–21, [doi:10.5194/acp-12-1-2012](https://doi.org/10.5194/acp-12-1-2012).
- (21) Girach, I. A., P. R. Nair, L. M. David, **Prashant Hegde**, M. K. Mishra, G. M. Kumar, S. M. Das, N. Ojha, and M. Naja (2011) The changes in near-surface ozone and precursors at two nearby tropical sites

- during annular solar eclipse of 15 January 2010, **Journal of Geophysical Research**, 117, D01303, doi:10.1029/2011JD016521.
- (22) Kumar, R., M. Naja, S. K. Satheesh, N. Ojha, H. Joshi, T. Sarangi, P. Pant, U. C. Dumka, **Prashant Hegde**, and S. Venkataramani (2011) Influences of the springtime northern Indian biomass burning over the central Himalayas, **Journal of Geophysical Research**, 116, D19302, doi:10.1029/2010JD015509.
- (23) Srivastava, A. K., P. Pant, **Prashant Hegde**, Sachchidanand Singh, U. C. Dumka, Manish Naja, Narendra Singh and Y. Bhavanikumar (2011) The influence of a south Asian dust storm on aerosol radiative forcing at a high-altitude station in central Himalayas, **International Journal of Remote Sensing**, 1-19, doi:10.1080/01431161.2010.531781.
- (24) Srivastava, A K, K Ram, P Pant, **Prashant Hegde** and Hema Joshi (2011) Black carbon aerosols over Manora Peak in the Indian Himalayan foothills: implications for climate forcing, **Environmental Research Letters**, 1-8, 7014002, doi:10.1088/1748-9326/7/1/014002.
- (25) Dumka, U. C, K. Krishna Moorthy, R, Kumar, **Prashant Hegde**, R, Sagar, P. Pant., N, Singh, and S, S, Babu, (2010) Characteristics of Aerosol Black Carbon Mass Concentration over a High Altitude location in the Central Himalayas from multi-year measurements **Atmospheric Research**, 96, 510–521.
- (26) Srivastava, A K, P Pant, U. C. Dumka, and **Prashant Hegde** (2010) Black Carbon Aerosol Characteristics and Its Radiative Impact over Nainital: A High-Altitude Station in the Central Himalayas, **Journal of the Institute of Engineering**, 8, 3, 1-10.
- (27) Ram, K., M. M. Sarin, and **Prashant Hegde** (2010) Long-term record of aerosol optical properties and chemical composition from a high-altitude site (Manora Peak) in Central Himalaya. **Atmospheric Chemistry and Physics**, 10, 11791-11803.
- (28) **Prashant Hegde**, Pant, P. and Kumar, Y. B. (2009) An integrated analysis of lidar observations in association with optical properties of aerosols from a high altitude location in central Himalayas, **Atmospheric Science Letters**, 10, 48–57.
- (29) **Prashant Hegde**, Major ionic composition of aerosol, rainwater and its impact on surface and sub-surface waters, in and around Mangalore, west coast of India. **Journal of Environmental Monitoring And Assessment** DOI 10.1007/s10661-006-9565-2 (2007).
- (30) **Prashant Hegde**, M.M. Sarin, A.K. Sudheer and B.R. Manjunatha, Characteristics of atmospheric aerosols over Mangalore region: southwest coast of India. **Atmospheric Environment** 41, 7751–7766 (2007).
- (31) **Prashant Hegde**, P. Pant, M. Naja, U. C. Dumka, Ram Sagar, Aerosol physical and optical properties during dust episode over Nainital. **Geophysical Research Letters** 34, L23802, doi:10.1029/2007GL030692 (2007).
- (32) P. Pant, **Prashant Hegde**, U. C. Dumka, R. Sagar, S. K. Satheesh, K. K. Moorthy, A. Saha, and M. K. Srivastava, Aerosol characteristics at a high-altitude location in central Himalayas: Optical properties and radiative forcing. **Journal of Geophysical Research**, 111, D17206, doi:10.1029/2005JD006768 (2006).
- (33) Dumka, U. C., S. K. Satheesh, P. Pant, **Prashant Hegde**, and K. Krishna Moorthy, Surface changes in solar irradiance due to aerosols over central Himalayas. **Geophysical Research Letters**, 33, L20809, doi: 10.1029/2006GL027814 (2006).
- (34) Srivastava, M. K., S. Singh, A. Saha, U. C. Dumka, **Prashant Hegde**, R. Singh, and P. Pant, Direct solar ultraviolet irradiance over Nainital, India, in the central Himalayas for clear-sky day conditions during December 2004. **Journal of Geophysical Research**, 111, D08201, doi:10.1029/2005JD006141 (2006).
- (35) P. Pant, **Prashant Hegde**, U. C. Dumka, Ram Sagar, S. K. Satheesh, K. Krishna Moorthy, Aerosol characteristics at a high altitude location during the ISRO-GBP Land Campaign-II. **Current Science**, 91,

8, 1053-1061 (2006).

- (36) **Prashant Hegde** and Manjunatha, B. R., Atmospheric deposition of H<sup>+</sup> and major ions around Mangalore, southwest coast of India. **Journal of Applied Geochemistry**, 5: 89-93 (2003).
- (37) Sreekumar, N.V., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Sarogini, B.K., Determination of nitrite by simple diazotization method. **Microchemical Journal (Elsevier)** 74:27-32 (2003).
- (38) Sreekumar, N.V., N.G. Bhat, Narayana, B., Nazareth, R., **Prashant Hegde** and Manjunatha, B.R., Selective complexometric determination of titanium (IV) using sodium potassium tartrate or ascorbic acid as masking agent. **Microchimica Acta** (Springer-Verlag) 141:29-33 (2003).
- (39) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Indirect complexometric determination of mercury (II) using potassium bromide as a selective masking agent. **Mikrochemica Acta** 140, 63-67 (2002).
- (40) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde**, Manjunatha, B.R., Indirect complexometric determination of thorium (IV) using sodium fluoride as a masking agent. **Mickochemica Acta** 140, 77-79 (2002).
- (41) Sreekumar, N.V., Nazareth, R., Narayana, B., **Prashant Hegde** and Manjunatha, B.R., Indirect complexometric determination of thorium (IV) using 5-sulfosalicylic acid as a masking agent'. **Chemical Analysis** (Warsaw) 47: 1-6 (2002).