

Chandra Venkataraman

Professor of Chemical Engineering and Climate Studies

Indian Institute of Technology Bombay

Powai, Mumbai-400 076, INDIA

Email: chandra@iitb.ac.in

Employment and Appointments

2024-present: Visiting Professor, Civil and Environmental Engineering, University of California, Berkeley (Mar 2024-Jun 2025)

2021-2024: Shobha Dixit Chair Professor, IIT Bombay.

2007-present: Professor, Department of Chemical Engineering and Centre for Climate Studies, IIT Bombay.

2012-2018: Founding Head, Centre for Climate Studies, IIT Bombay.

1995-2007: Assistant / Associate Professor, Center for Environmental Science & Engineering and Department of Chemical Engineering, IIT Bombay.

1994-1995: Associate Research Engineer, University of California, Riverside.

1985-1986: Research Associate, The Energy and Resources Institute, New Delhi.

2012-13: Fulbright-Nehru Fellow, Atmosphere Energy Programme, Stanford University.

2011-2014: Institute Chair Professor, Department of Chemical Engineering, IIT Bombay.

2005: Visiting Associate Professor, Centre for Global and Regional Environmental Research, Univ of Iowa.

2001-2004 (summers): Visiting Scientist, Laboratoire d'Optique Atmosphérique, France; Max Planck Institute for Chemistry, Germany.

Education

1993: Postdoctoral Fellow, Environmental Engineering Science, Stanford University.

1992: Ph.D. Chemical Engineering, University of California, Los Angeles.

1988: M.S. Chemical Engineering, University of Alabama.

1985: B.Tech. Chemical Engineering, Indian Institute of Technology Delhi.

Domain Expertise

Aerosol science & engineering, Climate science, Air quality, Sustainability and environmental policy.

Awards & Recognition

- Distinguished Alum Award, IIT Delhi, 2024.
- Fellow, Indian National Science Academy, 2022; Indian Academy of Science, 2018; Indian National Academy of Engineering, 2016
- IIT Bombay: Shobha Dixit Chair Professor, 2021; Teaching Excellence Award, 2020; Institute Chair Professor, 2011-2014; H.H. Mathur Research Excellence Award, 2008; R.G. Manudhane Faculty Research Excellence Award, 2006
- Vikram Sarabhai Award, Physical Research Laboratory, 2005
- START Young Scientist Award, IGBP, 1998
- AWMA Graduate Scholarship Award, 1990.
- Tau Beta Pi, Chemical Engineering Honour Society, 1988.

Extramural research grants

- *Principal investigator for research grants of INR 84.47 Crore (1Crore = 10 Million) (~US\$ 17M) from Indian and International funders during 1995-present:* The Indian Ministry of Environment, Forests and Climate Change, Department of Science and Technology; Health Effects Institute, USA; Open Philanthropy; Indo-French Centre for the Promotion of Advanced Research; Hewlett Foundation; Indo-US Science and Technology Forum. Network funding of INR 14.47 Cr (~US\$ 2M) DST-Centre of Excellence in Climate Studies, Phase I and II (2012-

2024; DST, India); INR 68.4 Cr (~US\$ 10M) the COALESCE network (2017-2025, MoEFCC, India) and INR 24.9 Cr (~US\$ 3M) PAVITRA (2023-2026, Open Philanthropy, USA).

Capacity building for multidisciplinary education and research

- At IIT Bombay:
 - *Founding Head*, of the Centre for Climate Studies, a first such doctoral program in India.
 - *Principal Investigator*, Department of Science and Technology-Centre of Excellence in Climate Studies (DST-CoECS), IIT Bombay, 2012-2018 (Phase I) and co-Investigator 2018-23 (Phase II).
 - *Co-PI*, Indo-US Joint Center on Nanoparticle Aerosol Science and Technology, connecting IIT Bombay, the Centre for Development of Advanced Computing, Pune, Washington University in St. Louis (Co-Director, Prof. Pratim Biswas), The University of Maryland and The University of Iowa.
- *National Coordinator for the COALESCE network*: Multi-institutional network for “Carbonaceous Aerosol Emissions, Source Apportionment and Climate Impacts” studies. Science lead, originated the project concept, lead a consortium of 22 institutions, 40 principal investigators and over 100 research students and staff in *Understanding scientific complexities related to carbonaceous aerosols, focusing on issues underlying their origin and fate, and their role as drivers of climate change over India*. Initiated a national observational network, field studies for activity and emission factor data and multi-model simulation studies with chemistry-climate models. Project goal to build a baseline for Indian emissions of short-lived climate pollutants and identify strategies for climate change mitigation and clean-air action.
- *Science Lead, Speciated Multi-Pollutant Generator (SMoG-India)*: Spearheaded the development of an Indian emission inventory and assessment platform.

Contribution to scientific assessments, science and policy networks

- *Coauthor*, Burden of Disease Attributable to Major Air Pollution Sources in India, GBD-MAPS Working Group, Health Effects Institute, USA, 2018.
- *Coauthor*, Bridging the Gap – The Role of Short-lived Climate Pollutants, Chapter 6, The UNEP Emissions Gap Report, 2017.
- *Lead author*, Bounding the Global Climate Effects of Black Carbon: A Scientific Assessment, IGAC-SPARC, NOAA-ESRL, J. Geophys. Res. doi:10.1002/jgrd.50171, 2013.
- *Networks (among many)*: Collaborative on Air Pollution and Health Effects Research in India, CAPHER-India, 2021; The World Bank and IIT Delhi Workshop on Air Quality Measurement and Analysis Systems (AQMAS), 2020-21; UNEP South Asia Consultation on Black Carbon, 2011; Scientific Steering Committee, Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS), IGBP, 2006-2009; USEPA Technical Workshop on Black Carbon Emissions and Climate Change, 2004; Task Force on Hemispheric Transport of Air Pollutants, 2006; International Global Atmospheric Chemistry project, 1998, 2002; International INDOEX Workshops, 1999, 2000.
- *Advisory and oversight (among many)*: Scientific Advisory Board, Centre for the Study of Science, Technology and Policy (C-STEP), 2020-present; IAEA Expert Mission to BATAN,

Bandung, Indonesia, 2019; Program Advisory Committees: Department of Science and Technology, 2018-present; Science and Engineering Research Board, 2016-2018.

Research Achievements

- Authored and co-authored over 150 peer-reviewed international journal publications, a book and four patents, receiving over 17400 citations (h-index=49, i-10 index=101).
- Keynote, plenary or invited speaker at over 45 conferences and workshops.
- Conference speaker at over 75 international and national conferences.

Mentorship and Advising

- Committed research mentor; former students hold positions in academic institutions, national laboratories and industrial R&D in India, North America and Europe.
- Provided mentorship toward understanding challenges encountered by women STEMM practitioners and devising effective institutional mechanisms to address them.
- Advised 23 PhD (5 ongoing); 38 masters; 5 postdoctoral (2 ongoing); 9 undergraduates.

Classroom Teaching

- Dedicated teacher who seeks to motivate thinking and questioning, hands-on and relevant practice and participative learning. Taught over 15 full semester classroom courses to undergraduate and postgraduate students from 1995 to present.
- Courses taught (2010-present): Process Fluid Mechanics; Introduction to Climate Change; Atmospheric Chemistry and Physics of Climate; Aerosol Technology; Chemical Engineering Laboratory; Materials Science.

Journal Editorial Boards

- Editorial Board, Journal of Aerosol Science (2020-present)
- Editorial Board, Tellus B – Chemical and Physical Meteorology (2011-present)
- Editorial Board, Journal of Atmospheric Chemistry (2009-2020)
- Editorial Board, Environmental Science & Technology (2018-2021)
- Editorial Advisory Board, Aerosol Science and Technology (2008-2014)
- Associate Editor, Journal of Environmental Engineering and Science (2004-2007)
- Editorial Board, Atmospheric Environment (2000-2006)

Organisational Leadership Functions

- Senate Nominee to the Board of Governors, Indian Institute of Technology Bombay (2018-2020).
- Faculty Search Committee, IDPCS (2018-present).
- Department Undergraduate Committee, ChE (2017-2019).
- Department Faculty Search Committee, ChE (2013-2015).
- Interdisciplinary Programme Committee, IDPCS (2012-2018).
- Convener, Committee for IIT Bombay Campus School and Junior College (2009-2012).
- Postgraduate Academic Performance Evaluation Committee (2007-2010).
- Undergraduate Curriculum Review, Convener of Committee on Electives, ChE (2003-2004).
- Campus Safety and Waste Disposal Committee (2006-2009).
- Department Laboratory Safety Committee, ChE (2006-2009).

- Department Postgraduate Committee, ChE (2004-2008).
- Secretary and Founding Member, IIT Bombay Women's Cell, 2001-2004.
- Coordinator, Library Resources, CESE (2000-2003).
- Coordinator, Growth Plan Committee, CESE (1999).
- Vice-President, Environmental Science and Engineering Association, CESE (1997-2000).
- Admissions Committee, CESE (1995-2000).
- M.Tech. Program Coordinator, CESE (2002-2005).
- Computer Resources Coordinator, CESE (1995-2000).

Professional Society Memberships

- Indian Aerosol Science and Technology Association.
- Indian Institute of Chemical Engineers.
- American Geophysical Union (2012-2015).
- American Association for Aerosol Research (1989-2000)

Professional Contributions

- Convener, Technical Program Committee, 14th Asian Aerosol Conference, Mumbai, 2025.
- Technical Program Committee, 10th International Aerosol Conference, St. Louis, USA, 2018.
- Technical Program Committee, Conference of the Indian Aerosol Science and Technology Association (2000, 2004, 2010, 2014, 2016, 2018).
- Managing Committee, Indian Aerosol Science and Technology Association. (1999-2001; 2006-2008; 2012-present).
- Co-Chair, Technical Programme Committee, Fourth Asian Aerosol Conference, December 13-16, 2005, Mumbai.
- Convener, International Workshop on Nanoparticle Aerosol Science and Technology, December 11-12, 2005, IIT Bombay, Mumbai,
- International Program Committee, Third Asian Aerosol Conference, January, 2004, Hong Kong
- Special Symposium on PM-2.5 and Related Issues, Second Asian Aerosol Conference, July 1-4, 2001, Busan, Korea.
- Organizing committee IASTA-2000, Conference of the Indian Aerosol Science and Technology Association, 2000, Mumbai.

Post-doctoral Supervision

Chirantan Sarkar (2017-18); Anwesa Bhattacharya (2019-20); Purnadurga Gesupalli (2020-21); Neeldip Barman (2023-25); Zainab Arub (2023-25).

PhD Research Supervision

S No.	Thesis title	Student	Year	Co-guide
1.	Climate co-benefits of multi-scale, multi-sector air pollution intervention in India	Girivendra Pratap Yadav	Ongoing	Srinidhi Balasubramanian
2.	Coincidence of temperature extremes and air pollution over Indian region	Dewashish Tiwari	Ongoing	Srinidhi Balasubramanian

3.	Organic aerosol formation processes and radiative impact in the Indian region	Sujit Maji	Ongoing	Abhishek Chakraborty, Abhilash Panicker (IITM Pune)
4.	Process studies of aerosol influence on extreme rainfall events using WRF-Chem	Kaushik Muduchuru	2024	Amit Kesarkar and Vikas Singh (NARL)
5.	Field measurements of carbonaceous aerosol emissions from the vehicular fleet in India: western region emission inventory and radiative forcing	Sohana Debbarma	2025	Co-guided with Prof. H. Phuleria
6.	Field measurements and radiative forcing of Aerosol emissions from residential heating and lighting activities in India	Navinya Chimurkar	2025	Co-guided with Prof. H. Phuleria
7.	Chemical characterisation and source apportionment of ambient fine particulate matter	Pooja Manwani	Ongoing	Co-guided with Prof. H. Phuleria
8.	Non-negative matrix factorization approaches to air pollution source identification	Nirav Leginwala	2023	Co-guided with M. Bhushan
9.	Regional modelling of carbonaceous aerosols over India: dry deposition, radiative forcing and temperature response	Arushi Sharma	2023	Subimal Ghosh
10.	Emissions scenarios and mitigation frameworks based on multiple impacts of short-lived climate pollutants in India	Kushal Tibrewal	2022	Harish Phuleria
11.	Building Sector: Emissions projection and economics in India	Priyanka Jajal	2022	Co-guided with Trupti Mishra
12.	Influence of aerosol and land-use changes on the Indian monsoon	Manmeet Singh	2022	Co-guided with Drs. R. Krishnan and A. Dey (EXT-IITM Pune)
13.	Field measurements, optical property modelling and radiative forcing of aerosol emissions from agricultural residue burning in India	Taveen Kapoor	2023	Co-guided with H. Phuleria
14.	Aerosol processes for engineering biocompatible nanoparticles for drug and gene delivery applications	Mahak Sapra	2017	S. Patankar P. Pradeep Kumar Y.S. Mayya
15.	Statistical approaches to understanding mechanisms of aerosol influence on precipitation	Prashant Dave	2018	Co-guided with M. Bhushan
16.	Aerosol influences on cloud properties and rainfall processes in the South Asian	Nitin Patil	2018	S. Ghosh

	monsoon region: Observational and GCM modelling studies			
17.	Technology-linked emission inventory and atmospheric modelling of short-lived climate pollutants over India	Pankaj Sadavarte	2016	None
18.	A source-oriented approach to aerosol influence on regional climate	Ribu Cherian	2012	None
19.	Aerosol synthesis of nanoparticles with controlled structural features for drug applications	Amol Pawar	2013	None
20.	Structure and aerodynamic deposition of nano-sized liposomes for aerosol drug delivery.	Saptarshi Chattopadhyay	2012	J. Bellare
21.	Evaluation of mixture effects in toxicity assessment of chemical mixtures in process and waste streams.	Shahid Parvez	2007	Co-guided with S. Mukherji
22.	A source-oriented analysis of aerosol transport and radiative forcing.	Shubha Verma	2006	None
23.	Emissions and atmospheric radiative effects of aerosols from biofuel combustion.	Gazala Habib	2005	None
24.	Regional scale modelling of aerosols and climate effects over India.	M. Sekhar Reddy	2002	None

Masters Research Supervision

S.No.	Thesis title	Student	Year	Co-guide
1.	Understanding heatwaves in India through a simple radiative-convective equilibrium model.	Prakhar Singh	ongoing	S. Ravichandran
2.	Modelling of PM _{2.5} road dust emission from on-road vehicles: Developing an emission inventory for resuspended road dust in India	Aakash Thakur	2023	None
3.	Organic aerosol composition and sources in the India region: Insights from aerosol mass spectroscopy	Ashutosh Nehete	2022	Abhishek Chakraborty, Brent Williams (WUSL)
4.	Spectral aerosol absorption properties in support of the COALESCE network	Adhishree Apte	2022	Rajan Chakraborty (WUSL)
5.	Designing nanoparticles for inhaled insulin Delivery	V. Rai	2017	Y.S. Mayya

6.	Experimental determination of critical supersaturation solubility of lipid and drug molecules for synthesis of drug containing nanoparticles	S. Ugrani	2016	Y.S. Mayya
7.	Quantification and Characterization of Emissions from open-field Agricultural Residue Burning in Maharashtra	M. Garg	2016	Co-guided with H. Phuleria
8.	Modeling aerosol synthesis of composite, layered nanoparticles	J. Gandhi	2014	Co-guided with Y.S. Mayya
10.	Offline modelling of aerosol optical effects from CTM aerosol fields	A. Mendhekar	2014	None
11.	Tropospheric ozone: precursors and photochemistry	M. Sarkar	2014	None
12.	A new data assimilation technique for aerosols: Improving estimates of GCM predicted aerosol properties over south Asia using observations from two satellite sensors	A. Baraskar	2013	M. Bhushan
13.	Aerosol synthesis of composite layered nanoparticles for controlled drug release applications	P. Asthana	2013	None
14.	Modeling Synthesis and Morphology of Twocomponent Nanoparticles Using Droplet-phase Aerosol Synthesis	S. Thanekar	2013	Y.S. Mayya
15.	Modeling emission sector effects on carbonaceous aerosols	A. Banthia	2012	None
16.	Modelling structure and morphology of nanoparticles from aerosol synthesis	Arpan Bandopadhyay	2012	Anurag Mehra
17.	Observational data assimilation for correcting chemical transport model predictions	Sampa Das	2012	Mani Bhushan
18.	Modeling atmospheric transport and deposition of aerosol emissions	Akshay Jain	2011	None
19.	Modeling nucleation and growth of solid phases in an evaporating drop	Manish Shetty	2011	Anurag Mehra
20.	Design of an electrostatic precipitator for nanoparticle collection	L. Dey	2011	None
21.	Modeling temperature-dependent equilibria in an evaporating drop	Ashish Deo Singh	2010	Anurag Mehra
22.	Modeling carbon footprint of direct emissions from Indian industrial transport & residential sectors.	K.S. Kathiar	2011	None
23.	Aerosol Synthesis of Nanoparticles for Drug Delivery	G. Desai	2010	Anurag Mehra

23.	Positive matrix factorization	Ahmad Ali	2009	Mani Bhushan
25.	Modeling Lung Deposition of Nanoparticle Aerosol Drugs	Preshit Dandekar	2009	Anurag Mehra
26.	Multilinear models for source identification	B. Lakavath	2009	Mani Bhushan
27.	Positive matrix factorization for source identification: Application to field data from Kanpur during the ISRO LC-II	B. Mehta	2008	Mani Bhushan
28.	Multivariate and trajectory modelling methods for aerosol source identification	L. Bhanuprasad	2007	Mani Bhushan
29.	Microstructure and hygroscopic surface growth of combustion aerosols	B. Wagh	2005	Jayesh Bellare
30.	Trace gas emissions from biomass burning in India	M. Shrivastava	2003	None
31.	Measurement and modelling of aerosol emissions from a sawdust packed-bedstove	P. Joshi	2002	Virendra Sethi, CESE
32.	Mutagenicity of polycyclic aromatic hydrocarbons in biofuel combustion aerosols	A.K. Swain	2001	Suparna Mukherji, CESE
33.	PM-10 chemical constituents in Mumbai during the INDOEX-IFP (1999)	C.K. Reddy	2001	None
34.	Application of inertial impaction to atmospheric aerosol measurement	T. Gupta	2000	None
35.	Respirable aerosols and polycyclic aromatic hydrocarbons in biofuel stove emissions	S.B. Sardar	2000	None
36.	Particulate polycyclic aromatic hydrocarbon emissions from biofuel cookstoves	G. Negi	1999	None
37.	Dilution source sampler for measurement of aerosol size distributions in biofuel stove smoke	G.U.M. Rao	1999	None
38.	Airborne sulphur and visibility degradation in Mumbai	P.K. Sinha	1999	None
39.	Global climate effects of anthropogenic aerosol emissions from the Indian subcontinent	B. Chandramouli	1997	Anand Patwardhan, SOM
40.	Chemical mass balance for source apportionment of particulate polycyclic aromatic hydrocarbons in Indian cities	P. Kulkarni	1997	None

Research Grants and Contracts (details)

S.No.	Sponsoring Agency	Project Title	Grant Amount (INR; 1Cr =10 million)	Period	Co-investigators
1.	Open Philanthropy, USA	PAVITRA – Air pollution management and intervention tool for India	5.35 Cr (IITB) All partners: US\$ 3M total	2023-2026	Prof.S. Balasubramanian, Prof. J. Apte (UCB), Prof. J. Marshall (UWa), Dr. P. Singh (CSTEP)
2.	UK Centre for Ecology & Hydrology – Edinburgh	South Asia Nitrogen Hub	0.27 Cr	2022-present	Co-I with Prof. Srinidhi Balasubramanian
3.	U.K. National Environmental Research Council	Improving adaptation strategies for climate extremes and air pollution affecting India	0.11 Cr	2022	None
4.	Rajasthan State Government (Environmental department)	State Climate Change Action Plan for Rajasthan	0.98 Cr	2020	Co-I with Prof. K.N. Narayanan and six co-Is.
5.	Department of Science & Technology	Technical Resource Unit for validating technologies for mitigating ambient air pollution	0.5 Cr	2019-2020	Co-I with Prof. Y.S. Mayya, Prof. R. Thaokar, Prof. H. Phuleria
6.	Wadhwani Research Centre for Bio – Engineering	Faraday wave instability device for high-concentration droplet generation: Application to aerosol synthesis of drug containing nanoparticles	0.188 Cr	2018-2019	Co-I with Prof. R. Dasgupta, Prof. Y.S. Mayya
7.	Tata Centre for Technology and Design	Electrospray based indoor air cleaner development	0.12 Cr	2018-2019	Co-I with Prof. Y.S. Mayya and R. Thaokar
8.	DST-Climate Change Programme	Centre of Excellence in Climate Studies (Phase II)	6.82 Cr	2018-2023	As co-PI with Prof. Subhankar Karmakar, Prof. Subimal Ghosh, Prof. Trupti Mishra
9.	DST-UK India Education and Research Initiative	Understanding recent extreme events in India in	0.51 Cr	2017-2019	As Co-PI with Prof. Arpita Mondal

		the context of climate change			
10.	Ministry of Environment, Forests and Climate Change	Carbonaceous Aerosol Emissions, Source Apportionment and Climate Impacts (NCAP-COALESCE)	All partners - 68.44 Cr 14.7 Cr - IITB	2017-2025	Prof. H. Phuleria, Prof. Mani Bhushan, Prof. A. Chakraborty, Prof. M. Sahu
11.	DST-Climate Change Programme	Centre of Excellence in Climate Studies (Phase I)	7.65 Cr	2012-2018	Prof. Subimal Ghosh, Prof. D. Parthasarathy
12.	Indo-French Centre for Promotion of Advanced Research	Design and scientific validation of an operational protocol allowing real time and dynamic mapping of particulate pollution using quantitative indicators in the vicinity of intense sources	0.19 Cr	2011-2014	Dr. J.F. Leon and Dr. B. Guinot, Laboratoire Aerologie, CNRS, Toulouse
13.	Department of Information Technology	Grid-enabled aerosol modeling system for climate change studies	0.15 Cr	2010-2012	Akshara Kaginalkar, C-DAC
14.	Department of Science & Technology	Aerosol Routes for the Synthesis of Nanoparticles with Controlled Structural Properties: Application to Biodegradable Particles for Drug Delivery	0.4 Cr	2008-2011	Prof. A. Mehra
15.	Indo-US Science and Technology Forum	Indo-US Joint Centre on Nanoparticle aerosol science and technology (NAST)	0.39 Cr	2008-2009	Prof. Pratim Biswas, WUSTL
16.	ISRO Geosphere Biosphere Program	Simulation and analysis of seasonal variability in aerosol-climate interactions over India	0.34 Cr	2007-2012	Ms. A. Kaginalkar, CDAC; Dr. S. Ramachandran, PRL
17.	Hewlett Foundation	Development benefits of clean energy in India	0.27 Cr	2006-2007	Prof. R. Banerjee
18.	Indo-US Science and Technology Forum	Workshop on nanoparticle aerosol science and technology	0.16 Cr	2005-2006	Prof. A. Mehra
19.	Department of Science & Technology	Workshop on nanoparticle aerosol science and technology	300,000	2005-2006	Prof. A. Mehra

20.	ISRO Geosphere Biosphere Programme	Emissions of aerosols and radiation perturbing constituents from biofuel combustion in India	0.15 Cr	2003-2007	None
21.	Ministry of Human Resource Development	Atmospheric modeling of aerosols and climate in the Indian region	0.1 Cr	2003-2006	Ms. A. Kaginalkar, C-DAC, pune
22.	INDOEX-USA grant	Aerosols and climate: PM-2.5 from combustion of biomass fuels in the Indian subcontinent	530,000	2000-2003	Prof. G.R. Cass, Georgia Inst of Tech, USA
23.	Indo-French Centre for the Promotion of Advanced Research	Aerosols and the Indian monsoons	580,000	2000-2003	Dr.Olivier Boucher Laboratoire d'Optique Atmospherique, Lille, France
24.	Centre for Indoor Air Research, USA, Contract 97-12A	Emission factors of respirable aerosols and polycyclic aromatic hydrocarbons from biofuel combustion in stoves.	0.47 Cr	1997-2000	None
25.	Department of Science and Technology, GoI	Developing a standard method to measure PAH in biofuel combustion aerosol.	290,000	1997-1999	None

Consulting Contracts

S.No.	Sponsoring Agency	Project Title	Grant Amount INR	Period	Co-investigators
1.	Environmental Defense Fund	EDF's Global Air Initiative	0.82 Cr	2024	None
2.	Health Effects Institute, Boston, USA	Indian emissions and emission inventory for the Global Burden of Disease from Major Air Pollution Sources	0.19 Cr	Dec, 2015- Dec, 2016	None
3.	University of Leicester, UK	Combustion Aerosol Toxicology Study	40,000	Jun-Dec, 2003	None

Patents

US Patent:

Venkataraman, C; Pawar, A.A. Method and a system for producing thermolabile nanoparticle with controlled properties and nanoparticles matrices made thereby. U.S. Patent 9,066,882, June 30, 2015.

<http://patft.uspto.gov/netacgi/nphParser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahhtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=9066882.PN.&OS=PN/9066882&RS=PN/9066882>

Indian Patent:

Venkataraman, C; Pawar, A.A. "A method and a system for producing thermolabile nanoparticles with controlled properties and nanoparticles matrices made thereby". Indian Patent 269100, September 30, 2015. <http://ipindiaonline.gov.in/patentsearch/search/index.aspx>

Peer Reviewed Journal Publications

150. Sengupta, S., P. J. Adams, S. Balasubramanian, S. Dey, B. Krishna, R. Subramanian, S. Thakrar, **C. Venkataraman**, S. Guttikunda (2025) The need for a new air quality modelling paradigm in India, submitted.
149. Tiwari, D., **Venkataraman, C.**, Anand, A., Maji, S., Mondal, A., Balasubramanian, S. (2025) High Risk from Coincidence of Extremes in Particulate Pollution and Heat in India, submitted.
148. Tibrewal, K., **C. Venkataraman**, G. Gupta, H. Phuleria, G. Habib, T. S. Kapoor, A. Gupta, J. Kumari, N. Chirmurkar, S. Khan et al. (2025) Speciated Multipollutant Generator (SMoG)-India-COALESCE: an emission estimation and management system for climate and air quality assessment, under preparation.
147. Navinya C., Kapoor T. S., G. Anurag, **C. Venkataraman**, H. C. Phuleria (2024) Carbonaceous aerosol emissions from secondary lighting sources: Emission factors and optical properties, *Atmospheric Pollution Research*, 15 (12), 102321, <https://doi.org/10.1016/j.apr.2024.102321>.
146. Navinya C., Kapoor T. S., G. Anurag, **C. Venkataraman**, P. Manwani, S. Lonkar, K. Yadav, R. S. Raman, J. Kumari, Md. S. Khan, G. Habib, H.C. Phuleria (2025) Underestimated Carbonaceous Aerosol Emissions from Residential Heating Sector in India, under preparation.
145. Navinya C., Kapoor T. S., **C. Venkataraman**, H. C. Phuleria, R. Chakrabarty (2025) Brown Carbon Light Absorption over India: Brown Carbon Light Absorption over India: Status and Needs for Discerning Climate Impacts, *Environmental Science & Technology – Air*, under revision.
144. Sharma, A., Mondal, A., Dhasmana, M., Tiwari, D., **Venkataraman, C.** (2025) Particulate air pollution enhanced dry and moist heat stress during the 2015 heatwave in India, submitted.
143. Sarkar, T., T.S. Kapoor, Y S Mayya, **C. Venkataraman**, S Anand. (2024). Near-source dispersion and coagulation parameterization: Application to biomass burning emissions. *Atmospheric Environment X*, 22, 100266, <https://doi.org/10.1016/j.aeaoa.2024.100266>.
142. Debbarma, S., **Venkataraman, C.** and Phuleria, H.C., (2025). Fine particulate PAHs characteristics measured in an Indian roadway tunnel. under preparation.
141. Manwani, P., **C. Venkataraman** and H. C. Phuleria (2025) Impact of Open-Field Biomass Burning on Regional Air Quality in Northern India, *Journal of Environmental Science*, under review

140. Manwani, P., T.S. Kapoor, A. Gupta, S. Duhan, J. S. Laura, R. Sharma, P. Lokhande, D. Haswani, R. Sunder Raman, **C. Venkataraman**, and H. C. Phuleria (2025) Seasonal variation and chemical characterization of fine particulate matter and the influence of episodic events at regional background locations in northern India. *Environmental Research*, under preparation.
139. Manwani, P., N. Lekinwala, M. Bhushan, **C. Venkataraman**, H. C. Phuleria (2025) Unravelling the Nexus of Emission Sources and Meteorology on Regional PM_{2.5}: A Comprehensive Analysis Using Source Apportionment Model and Machine Learning for Effective Pollution Mitigation Strategies, under preparation.
138. **Venkataraman, C.**, Anand, A., Maji, S., Barman, N., Tiwari, D., Muduchuru, K., Sharma, A., Gupta, G., Bhardwaj, A., Haswani, D., Pullokar, D., Yadav, K., Raman, R.S., Imran, M., Habib, G., Kapoor, T.S., Gupta, A., Sharma, R., Phuleria, H.C., Qadri, A.M., Singh, G.K., Gupta, T., Dhandapani, A., Kumar, R.N., Mukherjee, S., Chatterjee, A., Rabha, S., Saikia, B.K., Saikia, P., Ganguly, D., Chaudhary, P., Sinha, B., Roy, S., Muthalagu, A., Qureshi, A., Lian, Y., Pandithurai, G., Prasad, L., Murthy, S., Duhan, S.S., Laura, J.S., Chhangani, A.K., Najar, T.A., Jehangir, A., Kesarkar, A.P., Singh, V., (2024) Drivers of PM_{2.5} episodes and exceedance in India: A synthesis from the COALESCE network, *J. Geophysical Research: Atmospheres*, 129, e2024JD040834. <https://doi.org/10.1029/2024JD040834>.
137. Kapoor, T. S., Navinya, C., Apte, A., Shetty, N. J., Lokhande, P., Singh, S., Murthy, S., Daswal, M., Laura, J. S., Muthalagu A., Qureshi, A., Bhardwaj, A., Sunder Raman, R., Lian, Y., Pandithurai, G., Chaudhary, P., Sinha, S., Rabha, S., Saikia, B., Najar, T. A., Jehangir, A., Mukherjee, S., Chatterjee, A., Phuleria, H. C., Chakrabarty, R. K., **Venkataraman, C.** (2024) Spatial variability in surface aerosol light absorption across India, *Geophysical Research Letters*, 51, e2024GL110089. <https://doi.org/10.1029/2024GL110089>.
136. Kapoor, T. S., Anurag, G., Navinya, C., Yadav, K., Raman, R. S., **Venkataraman C.**, Phuleria, H. C. (2025) Strongly absorbing aerosol emissions from crop residue burning in India. *RSC Environ. Sci.: Atmos.*, 5, 316–331, <https://doi.org/10.1039/d4ea00104d>.
135. Navinya C., Kapoor T. S., Gupta A., **C. Venkataraman**, H. C. Phuleria, R. Chakrabarty, (2024) Brownness of Organics in Anthropogenic Biomass Aerosols over South Asia, *Atmospheric Chemistry and Physics*, 24, 13285–13297, <https://doi.org/10.5194/acp-24-13285-2024>.
134. Singh, M., Persad, G. G., Zong-Liang Yang, R. Krishnan, Ayantika, D. C., Wen-Ying Wu, Sabiha Tabassum, **Venkataraman, C.**, Swapna, P., Prajeesh, A.G., Sandeep, N., Ramesh, V., Mujumdar, M., Niyogi, D. (2025) Interactions between anthropogenic aerosols and land-atmosphere coupling in modulating Indian summer monsoon precipitation, *Environ. Res. Lett.* submitted.
133. Lal, R. M., A. S. Nagpure, A. Anand, S. Maji, K. Tibrewal, G. Gupta, **C. Venkataraman**, K.K. Tong (2025) Transboundary emission contribution to PM_{2.5}-air quality in Indian cities, *Environ. Sci. Technol. Lett.* in press <https://doi.org/10.1088/1748-9326/adc147>.
132. Kumari, J., G. Habib, S. Khan, Md. Imran, K. Zaidi, A. Yogesh, S. Nagendra, N. Chimurkar, H. Phuleria, R. Arya, T. Mandal, A. Muthalagu, A. Qureshi, R. Bhat, A. Jehangir, S. Jain, A. Goel, S. Rabha, B. Saikia, P. Chaudhary, B. Sinha, A. Das, R. Raman, A. D., R. Kumar, Y. Lian, G. Pandithurai, S. Mukherjee, A. Chatterjee, **C. Venkataraman**, (2025). Estimating shifts in fuel

stacking among solid biomass fuels and liquified petroleum gas in rural households: A pan-India analysis, submitted.

131. Muduchuru K., **C. Venkataraman**, V. Singh, A. Kesarkar, A. Sharma, S. Devaliya, R. S. Raman, S. Ghosh, S. Dey (2025). Evaluating cloud properties over India: COALESCE intercomparison of regional climate models and sensitivity to aerosol feedback effects, under preparation.
130. Muduchuru, K., **C. Venkataraman**, A. Bhattacharya, A. Gulzar, A. Mondal, M. Das (2025). Anthropogenic aerosols induce drying trends in Indian monsoon wet and dry extremes, under preparation.
129. Mandal, S., Rajiva, A., Kloog, I., Menon, J. S., Lane, K. J., Amini, H., Walia, G. K., Dixit, S., Nori-Sarma, A., Dutta, A., Sharma, P., Jaganathan, S., Madhipatla, K. K., Wellenius, G. A., de Bont, J., **Venkataraman, C.**, Prabhakaran, D., Prabhakaran, P., Ljungman, P., & Schwartz, J. (2024). Nationwide estimation of daily ambient PM_{2.5} from 2008 to 2020 at 1 km² in India using an ensemble approach. *PNAS nexus*, 3(3), pgae088. <https://doi.org/10.1093/pnasnexus/pgae088>.
128. Debbarma, S., N. Raparathi, **C. Venkataraman**, H.C. Phuleria (2024) Impact of real-world traffic and super-emitters on vehicular emissions under inter-city driving conditions in Maharashtra, India. *Atmospheric Pollution Research*, 15(4), <https://doi.org/10.1016/j.apr.2024.102058>
127. Debbarma, S., Raparathi, N., **Venkataraman, C.** and Phuleria, H.C., (2024). Characterization and apportionment of carbonaceous aerosol emission factors from light-duty and heavy-duty vehicle fleets in Maharashtra, India. *Environmental Pollution*, <https://doi.org/10.1016/j.envpol.2024.123479>
126. Khaiwal, R., Bhardwaj, S., Ram, C., Goyal, A., Singh, V., **Venkataraman, C.**, Bhan, S. C., Sokhi, R. S., & Mor, S. (2024). Temperature projections and heatwave attribution scenarios over India: A systematic review. *Heliyon*, 10(4), e26431. <https://doi.org/10.1016/j.heliyon.2024.e26431>
125. Chatterjee, D., McDuffie, E. E., Smith, S. J., Bindle, L., van Donkelaar, A., Hammer, M. S., **Venkataraman, C.**, Brauer, M., & Martin, R. V. (2023). Source Contributions to Fine Particulate Matter and Attributable Mortality in India and the Surrounding Region. *Environmental science & technology*, 57(28), 10263–10275. <https://doi.org/10.1021/acs.est.2c07641>
124. Kapoor, T.S. H.C. Phuleria, B. Sumlin, N. Shetty, G. Anurag, M. Bansal, S. Duhan, S. Khan, J. Laura, P. Manwani, R. K. Chakrabarty, **C. Venkataraman** (2023) Optical Properties and Refractive Index of Wintertime Aerosol at a Highly Polluted North-Indian Site, *Journal of Geophysical Research: Atmospheres*, <https://doi.org/10.1029/2022JD038272>.
123. Tibrewal, K., **Venkataraman, C.**, Phuleria, H., Joshi, V., Maithel, S., Damle, A., Gupta, A., Lokhande, P., Rabha, S., Saikia, B. K., Roy, S., Habib, G., Rathi, S., Goel, A., Ahlawat, S., Mandal, T. K., Azharuddin Hashmi, M., Qureshi, A., Dhandapani, A., Sinha, B. (2023). Reconciliation of energy use disparities in brick production in India. *Nature Sustainability*. <https://doi.org/10.1038/s41893-023-01165-x>
122. Chatterjee, D., Mcduffie, E. E., Smith, S. J., Bindle, L., Van 3 Donkelaar, A., Hammer, M. S., **Venkataraman, C.**, Brauer, M., & Martin, R. V. (2023). Source Contributions to Fine Particulate Matter and Attributable Mortality in India and the Surrounding Region. *Environmental Science and Technology*. <https://doi.org/10.1021/acs.est.2c07641>

121. Kapoor, T.S., C. Navinya, G. Anurag, P. Lokhande, S. Rathi, A. Goel, R. Sharma, R. Arya, T. K. Mandal, K. P. Jithin, S. Nagendra, M. Imran, L. Kumari, A. Muthalagu, A. Qureshi, T. A. Najar, A. Jehangir, D. Haswani, R. Sunder Raman, S. Rabha, B. Saikia, Y. Lian, G. Pandithurai, P. Chaudhary, B. Sinha, Abisheg D., J. Iqbal, S. Mukherjee, A. Chatterjee, **C. Venkataraman**, H. C. Phuleria (2023) Reassessing the availability of crop residue as a bioenergy resource in India: a field-survey based study. *Journal of Environmental Management*, DOI: 10.1016/j.jenvman.2023.118055.
120. Chimurkar N., T. S. Kapoor, A. Gupta, P. Lokhande, R. Sharma, S.V. Laxmi Prasad, S.M. Shiva Nagendra, J. Kumari, G. Habib, R. Arya, T.K. Mandal, A. Muthalagu, A. Qureshi, T.A. Najar, A. Jehangir, S. Jain, A. Goel, S. Rabha, B.K. Saikia, P. Chaudhary, B. Sinha, D. Haswani, R. Sunder Raman, A. Dhandapani, J. Iqbal, S. Mukherjee, A. Chatterjee, Y. Lian, G. Pandithurai, **C. Venkataraman**, H. C. Phuleria (2023) Heating and lighting: Understanding overlooked energy-consumption activities in the Indian residential sector, *Environmental Research Communications*, 5(4). <https://doi.org/10.1088/2515-7620/acca6f>
119. Sharma, A., **Venkataraman, C.**, Muduchuru, K., Singh, V., Kesarkar, A., Ghosh, S., Dey, S. (2023) Aerosol radiative feedback enhances particulate pollution over India: A process understanding, *Atmospheric Environment*, <https://doi.org/10.1016/j.atmosenv.2023.119609>
118. Devaliya, S., Bhate, J., Sunder Raman, R., Muduchuru, K., Sharma, A., Singh, V., Kesarkar, A.P., & **Venkataraman, C.** (2023). Assessment of the impact of atmospheric aerosols and meteorological data assimilation on simulation of the weather over India during summer 2015. *Atmospheric Environment*, <https://doi.org/10.1016/j.atmosenv.2023.119586>
117. Ghosh, S., Dey, S., Das, S., Riemer, N., Giuliani, G., Ganguly, D., **Venkataraman, C.**, Giorgi, F., Tripathi, S. N., Ramachandran, S., Rajesh, T. A., Gadhave, H., and Srivastava, A. K.: Towards an improved representation of carbonaceous aerosols over the Indian monsoon region in a regional climate model: RegCM, *Geosci. Model Dev.*, 16, 1–15, <https://doi.org/10.5194/gmd-16-1-2023>, 2023
116. Hancock, S., A.M. Fiore, D. M. Westervelt, G. Correa, J-F. Lamarque, **C. Venkataraman**, A. Sharma (2023). Changing PM_{2.5} and related meteorology over India from 1950–2014: A new perspective from a chemistry-climate model ensemble. *Environ. Res. Climate* 2 015003. <https://doi.org/10.1088/2752-5295/acb22a>
115. Lal, R. M., K. Tibrewal, **C. Venkataraman**, KK Tong, A. Fang, Q. Ma, S. Wang, J. Kaiser, A. Ramaswami, AG Russell, “Impact of circular waste-heat reuse pathways on PM_{2.5}-air quality, human health, and CO₂ emissions in India; comparison with material exchange potential,” *Environmental Science and Technology*, 2022, 56(13), <https://doi.org/10.1021/acs.est.1c05897>
114. Pai, S. J., Heald, C. L., Coe, H., Brooks, J., Shephard, M. W., Dammers, E., Apte, J. S., Luo, G., Yu, F., Holmes, C. D., **Venkataraman, C.**, Sadavarte, P., & Tibrewal, K. (2022). Compositional Constraints are Vital for Atmospheric PM_{2.5} Source Attribution over India. *ACS Earth and Space Chemistry*, 6(10), 2432–2445. <https://doi.org/10.1021/acsearthspacechem.2c00150>

113. Bhattacharya, A., **Venkataraman, C.**, Sarkar, T., Sharma, A. K., Sharma, A., Anand, S., Ganguly, D., Bhawar, R., Dey, S., & Ghosh, S. (2022). An Analysis of the Aerosol Lifecycle Over India: COALESCE Intercomparison of Three General Circulation Models. *Journal of Geophysical Research: Atmospheres*, 127(14), 1–22. <https://doi.org/10.1029/2022JD036457>
112. Karambelas, A., Fiore, A. M., Westervelt, D. M., McNeill, V. F., Randles, C. A., **Venkataraman, C.**, et al. (2022). Investigating drivers of particulate matter pollution over India and the implications for radiative forcing with GEOS-chem-tomas15. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD036195. <https://doi.org/10.1029/2021JD036195>
111. Chaudhary, E., S. Dey, S. Ghosh, S. Sharma, N. Singh, S. Agarwal, K. Tibrewal, **C. Venkataraman**, A.V. Kurpad, A.J. Cohen, S-X. Wang, S. Jain (2022) Reducing the burden of anaemia in Indian women of reproductive age with clean-air targets, *Nature Sustainability*, 10.1038/s41893-022-00944-2.
110. Kapoor, T.S., **C. Venkataraman**, C. Sarkar, H. C. Phuleria, A. Chatterjee, G. Habib, J. S. Apte (2022) Estimation of real-time brown carbon absorption: An observationally constrained Mie theory-based optimization method, *Journal of Aerosol Science*, 166, 106047, <https://doi.org/10.1016/j.jaerosci.2022.106047>.
109. Sarkar, T., , S. Ananda, A. Bhattacharya, A. Sharma, **C. Venkataraman**, A. Sharma, D. Ganguly, R. Bhawar (2022) Evaluation of the simulated aerosol optical properties over India: COALESCE model inter-comparison of three GCMs with ground and satellite observations, *Science of the Total Environment* 852, 158442, <http://dx.doi.org/10.1016/j.scitotenv.2022.158442>.
108. Bhattacharya, A., **C. Venkataraman**, T. Sarkar, A.K. Sharma, A. Sharma, S. Anand, D. Ganguly, R. Bhawar, S. Dey, S. Ghosh (2022) An analysis of the aerosol lifecycle over India: COALESCE intercomparison of three general circulation models, *Journal of Geophysical Research-Atmospheres*, 127, e2022JD03645. <https://doi.org/10.1029/2022JD036457>.
107. Maheshwarkar, P., Ralhan, A., Sunder Raman, R., Tibrewal, K., **Venkataraman, C.**, Dhandapani, A., Kumar, R.N., Mukherjee, S., Chatterje, A., Rabha, S. and Saikia, B.K., (2022). “Understanding the influence of meteorology and emission sources on PM_{2.5} mass concentrations across India: first results from the COALESCE network.” *Journal of Geophysical Research: Atmospheres*, 127(4) <https://doi.org/10.1029/2021JD035663>
106. Yadav, S., A.K. Sam, **C. Venkataraman**, A. Kumar, H. C. Phuleria (2022) ¹H NMR structural signatures of source and atmospheric organic aerosols in India, *Chemosphere*, <https://doi.org/10.1016/j.chemosphere.2022.134681>.
105. Chowdhury, S., A. Pozzer, A. Haines, K. Klingmüller, T. Münzel, P. Paasonen, A. Sharma, **C. Venkataraman**, J. Lelieveld (2022) Global health burden of ambient PM_{2.5} and the contribution of anthropogenic black carbon and organic aerosols, *Envt. Intl.*, <https://doi.org/10.1016/j.envint.2021.107020>.

104. Tibrewal, K. and **C. Venkataraman** (2022) COVID-19 lockdown closures of emissions sources in India: Lessons for air quality and climate policy, *J. Environ. Mgmt.*, <https://doi.org/10.1016/j.jenvman.2021.114079>
103. Sharma, A., A. Bhattacharya, **C. Venkataraman** (2022) Trends in temperature and snow cover fraction in the Himalaya region: GCM simulations of the influence of aerosol radiative effects, *Sci. Total. Environ.* <https://doi.org/10.1016/j.scitotenv.2021.151299>
102. Muduchuru, K., **C. Venkataraman** (2022) Influence of aerosols spatial heterogeneity of atmospheric static energy and stratiform rainfall response over India in the ECHAM6-HAM2 GCM, *Climate Dynamics*, <https://doi.org/10.1007/s00382-021-05908-4>
101. Pandey, A., Brauer, M., Cropper, M. L., Balakrishnan, K., Mathur, P., Dey, S., Turkgulu, B., Kumar, G. A., Khare, M., Beig, G., Gupta, T., Krishnakutty, R. P., Causey, K., Cohen, A. J., Bhargava, S., Aggarwal, A. N., Agrawal, A., Awasthi, S., Bennitt, F., ... Dandona, L. (2021). Health and economic impact of air pollution in the states of India: the Global Burden of Disease Study 2019. *The Lancet Planetary Health*, 5(1), e25–e38. [https://doi.org/10.1016/S2542-5196\(20\)30298-9](https://doi.org/10.1016/S2542-5196(20)30298-9)
100. Chowdhury, S., A. Haines, K. Klingmüller, V. Kumar, A. Pozzer, **C. Venkataraman**, C. Witt and J. Lelieveld (2021) Global and national assessment of the incidence of asthma in children and adolescents from major sources of ambient NO₂, *Environ. Res. Lett.* 16, 3, <https://doi.org/10.1088/1748-9326/abe909>.
99. Tibrewal, K. and **C. Venkataraman** (2020) Climate co-benefits of air quality and clean energy policy in India, *Nature Sustainability*, <https://www.nature.com/articles/s41893-020-00666-3>.
98. McDuffie, E.E., S.S. Smith, K. Tibrewal, **C. Venkataraman**, M. Brauer, R.V. Martin (2020) A global inventory of atmospheric pollutants from sector- and fuel-specific anthropogenic emission sources (1970-2017): An application of the Community Emissions Data System (CEDS), *Earth Syst. Sci. Data*, 12, 1–32, <https://doi.org/10.5194/essd-12-1-2020>.
97. Singh, M., R. Krishnan, B. Goswami, A. D. Choudhury, P. Swapna, R. Vellore, A. G. Prajeesh, N. Sandeep, **C. Venkataraman**, R. V. Donner, N. Marwan, J. Kurths (2020) Fingerprint of Volcanic Forcing on the ENSO–Indian Monsoon Coupling, *Science Advances*, 6 (38), eaba8164, DOI: 10.1126/sciadv.aba8164.
96. Ravishankara, A.R., L.M. David, J.R. Pierce and **C. Venkataraman** (2020) Outdoor air pollution in India is not only an urban problem, *Proceedings of the National Academy of Science (USA)*, www.pnas.org/cgi/doi/10.1073/pnas.2007236117.
95. Conibear, L., E.W. Butt, C. Knote, N.L. Lam, S. R. Arnold, K. Tibrewal, **C. Venkataraman**, D.V. Spracklen and T.C. Bond (2020) A complete transition to clean household energy can save one-quarter of the healthy life lost to particulate matter pollution exposure in India, *Environmental Research Letters*, <https://doi.org/10.1088/1748-9326/ab8e8a>.

94. Mondal, A., N. Sah, A. Sharma, **C. Venkataraman** and N. Patil (2020) Absorbing aerosols and high temperature extremes in India: a general circulation modelling study, *Int. J. Climatol.*, <https://doi.org/10.1002/joc.6783>.
93. **Venkataraman, C.**, M. Bhushan, S. Dey, D. Ganguly, T. Gupta, G. Habib, A. Kesarkar, H. Phuleria, R. Sunder Raman (2020) Indian network project on Carbonaceous Aerosol Emissions, Source Apportionment and Climate Impacts (COALESCE), *Bull. Am. Met. Soc.*, <https://doi.org/10.1175/BAMS-D-19-0030.1>.
92. Dave, P., **C. Venkataraman**, M. Bhushan (2020) Absorbing aerosol influence on temperature extreme events: An observation based study over India, *Atmos. Environ.*, <https://doi.org/10.1016/j.atmosenv.2019.117237>.
91. **Venkataraman, C.**, Sharma, A., Tibrewal, K., Maity, S. and Muduchuru, K. (2019) Carbonaceous aerosol emissions sources dominate India's wintertime air quality, *Environmental Manager (AWMA)*, December, 17-21.
90. Sarkar, C., **C. Venkataraman**, S. Yadav, H. C. Phuleria, Abhijit Chatterjee (2019) Origin and properties of soluble brown carbon in freshly emitted and aged ambient aerosols over an urban site in India, *Environmental Pollution*, 254, <https://doi.org/10.1016/j.envpol.2019.113077>.
89. David, L.M., A.R. Ravishankara, J.K. Kodros, J.R. Pierce, **C. Venkataraman** and P. Sadavarte (2018) Premature Mortality Due to PM_{2.5} Over India: Effect of Atmospheric Transport and Anthropogenic Emissions, *GeoHealth*, 3, 2–10, <https://doi.org/10.1029/2018GH000169>.
88. Patil, N. **C. Venkataraman**, K. Muduchuru, S. Ghosh, A. Mondal (2018) Disentangling sea-surface temperature and anthropogenic aerosol influences on recent trends in South Asian monsoon rainfall, *Climate Dynamics*, <https://doi.org/10.1007/s00382-018-4251-y>.
87. David, L. M., Ravishankara, A. R., Kodros, J. K., **Venkataraman, C.**, Sadavarte, P., Pierce, J. R., Chaliyakunnel, S., & Millet, D. B. (2018). Aerosol Optical Depth Over India. *Journal of Geophysical Research: Atmospheres*, 123(7), 3688–3703. <https://doi.org/10.1002/2017JD027719>
86. **Venkataraman, C.**, Brauer, M., Tibrewal, K., Sadavarte, P., Ma, Q., Cohen, A., Chaliyakunnel, S., Frostad, J., Klimont, Z., Martin, R. V., Millet, D. B., Philip, S., Walker, K., and Wang, S. (2018) Source influence on emission pathways and ambient PM_{2.5} pollution over India (2015–2050), *Atmos. Chem. Phys.*, 18, 8017-8039, <https://doi.org/10.5194/acp-18-8017-2018>
85. Shastri, H., Barik, B., Ghosh, S., **Venkataraman, C.**, & Sadavarte, P. (2017). Flip flop of Day-night and Summer-Winter Surface Urban Heat Island Intensity in India. *Scientific Reports*, 7(December 2016), 1–8. <https://doi.org/10.1038/srep40178>
84. Dave, P., M. Bhushan and **C. Venkataraman** (2017) Aerosols cause intraseasonal short-term suppression of Indian monsoon rainfall, *Scientific Reports (Nature publishing group)*, 7: 17347, DOI:10.1038/s41598-017-17599-1.

83. Sapra, M., Y.S. Mayya, **C. Venkataraman** (2017) Engineering of layered, lipid-encapsulated drug nanoparticles through spray-drying, *Colloids and Surfaces B. Biointerfaces*, 154, 178-185, doi:10.1016/j.colsurfb.2017.03.037.
82. Sapra, M., S. Ugrani, Y.S. Mayya, **C. Venkataraman** (2017) Estimation of critical supersaturation solubility (CSS) for predicting diameters of dry particles prepared by air-jet atomization of solutions, *Journal of Colloid and Interface Science*, doi:10.1016/j.jcis.2017.04.008.
81. Patil, N., P. Dave, **C. Venkataraman** (2017) Contrasting influences of aerosols on cloud properties during deficient and abundant monsoon years, *Scientific Reports (Nature publishing group)*, 7, 44996, doi: 10.1038/srep44996.
80. Philip, S., R. Martin, G. Snider, C. Weagle, A.V. Donkelaar, M. Brauer, D. Henze, Z. Klimont, **C. Venkataraman**, S. Guttikunda and Q. Zhang (2017) Anthropogenic fugitive, combustion and industrial dust is a significant, underrepresented fine particulate matter source in global atmospheric models, *Environmental Research Letters*, doi:10.1088/1748-9326/aa65a4.
79. Sapra, M., Y.S. Mayya and **C. Venkataraman** (2016) Air-jet atomization of organic precursor solutions to synthesize lipid nanoparticles: Dependence of size on solute concentration, *Journal of Aerosol Science*, 100, 1-13, 10.1016/j.jaerosci.2016.05.007.
78. Sarkar, M., **C. Venkataraman**, S. Guttikunda, P. Sadavarte (2016) Indian emissions of technology-linked NMVOCs with chemical speciation: An evaluation of the SAPRC99 mechanism with WRF-CAMx simulations, *Atmospheric Environment*, 134, 70-83, <http://dx.doi.org/10.1016/j.atmosenv.2016.03.037>.
77. Sapra, M., A.A. Pawar and **C. Venkataraman** (2016) A single-step aerosol process for in-situ surface modification of nanoparticles: Preparation of stable aqueous nanoparticle suspensions, *Journal of Colloid and Interface Science*, 464, 167-174, doi:10.1016/j.jcis.2015.11.021.
76. **Venkataraman, C.**, S. Ghosh, and M. Kandlikar (2016) Breaking out of the box: India and climate action on short-lived climate pollutants, *Environmental Science and Technology*, 50(23):12527-12529.
75. Baraskar, A., M. Bhushan, **C. Venkataraman** and R. Cherian (2016) An offline constrained data assimilation technique for aerosols: Improving GCM simulations over South Asia using observations from two satellite sensors, *Atmospheric Environment*, 132, 36-48, doi: 10.1016/j.atmosenv.2016.02.026.
74. Sadavarte, P., **C. Venkataraman**, R. Cherian, N. Patil, B.L. Madhavan, T. Gupta, S.Kulkarni, G.R. Carmichael, B. Adhikary (2016) Seasonal differences in aerosol abundance and radiative forcing in months of contrasting emissions and rainfall over northern South Asia, *Atmospheric Environment*, 125, 512-523, doi:10.1016/j.atmosenv.2015.10.092.

73. Bandyopadhyay, A., A.A. Pawar, **C. Venkataraman**, A. Mehra (2015) Modelling size and structure of nanoparticles formed from drying of submicron solution aerosols, *Journal of Nanoparticle Research*, 17(1), 1-14, doi:10.1007/s11051-014-2842-z.
72. Pandey, A., P. Sadavarte, A.B. Rao and **C. Venkataraman** (2014) A technology-linked multi-pollutant inventory of Indian energy-use emissions: II. Residential, agricultural and informal industries sectors, *Atmospheric Environment*, 99, pp.341-352, doi:10.1016/j.atmosenv.2014.09.080.
71. Sadavarte, P. and **C. Venkataraman** (2014) Trends in multi-pollutant emissions from a technology-linked inventory for India: I. Industry and transport sectors, *Atmospheric Environment*, 99, pp.353-364, doi:10.1016/j.atmosenv.2014.09.081.
70. Pandey, A. and **C. Venkataraman** (2014) Estimating emissions from the Indian transport sector with on-road fleet composition and traffic volume, *Atmospheric Environment*, 98, pp.123-133, doi:10.1016/j.atmosenv.2014.08.039.
69. Michael, M., A. Yadav, S.N. Tripathi, V.P. Kanawade, A. Gaur, P. Sadavarte, **C. Venkataraman** (2014) Simulation of trace gases and aerosols over the Indian domain: evaluation of the WRF-Chem model, *Geoscientific Model Development Discussions*, 1, 431-482.
68. Cherian, R., **C. Venkataraman**, J. Quaas, and S. Ramachandran (2013) GCM simulations of anthropogenic aerosol-induced changes in aerosol extinction, atmospheric heating and precipitation over India, *Journal of Geophysical Research-Atmospheres*, 118, 2938-2955, doi:10.1002/jgrd.50298.
67. Bond, T. C., Doherty, S. J., Fahey, D. W., Forster, P. M., Berntsen, T., Deangelo, B. J., Flanner, M. G., Ghan, S., Kärcher, B., Koch, D., Kinne, S., Kondo, Y., Quinn, P. K., Sarofim, M. C., Schultz, M. G., Schulz, M., **Venkataraman, C.**, Zhang, H., Zhang, S., ... Zender, C. S. (2013). Bounding the role of black carbon in the climate system: A scientific assessment. *Journal of Geophysical Research Atmospheres*, 118(11), 5380–5552. <https://doi.org/10.1002/jgrd.50171>
66. Chapter Lead Author “Black carbon global emission magnitudes and source categories,” In T. C. Bond, S. J. Doherty, D. W. Fahey, P. M. Forster, T. Berntsen, B. J. DeAngelo, M. G. Flanner, S. Ghan, B. Kärcher, D. Koch, S. Kinne, Y. Kondo, P. K. Quinn, M. C. Sarofim, M. G. Schultz, M. Schulz, **C. Venkataraman**, H. Zhang, S. Zhang, N. Bellouin, S. K. Guttikunda, P. K. Hopke, M. Z. Jacobson, J. W. Kaiser, Z. Klimont, U. Lohmann, J. P. Schwarz, D. Shindell, T. Storelvmo, 10. S. G. Warren, and C. S. Zender, Bounding the role of black carbon in the climate system: A scientific assessment, *Journal of Geophysical Research-Atmospheres*, VOL. 118, 1–173, doi 10.1002/jgrd.50171.
65. Chattopadhyay, S., S.H. Ehrman, **C. Venkataraman** (2013) Size distribution and dye release properties of submicron liposome aerosols, *Powder Technology*, 246, 530-538, 2013, [dx.doi.org/10.1016/j.powtec.2013.06.013](https://doi.org/10.1016/j.powtec.2013.06.013).
64. Pawar, A.A. and **C. Venkataraman** (2013) Pulse-Heat Aerosol Reactor (PHAR): Processing thermolabile biomaterials and biomolecules into nanoparticles with controlled properties, *Aerosol Science and Technology*, 47(4), 383-394, doi:10.1080/02786826.2012.754840.

63. Cherian, R., **C. Venkataraman**, S. Ramachandran, J. Quaas and S. Kedia (2012) Examination of aerosol distributions and radiative effects over the Bay of Bengal and the Arabian Sea region during ICARB using satellite data and a general circulation model. *Atmospheric Chemistry and Physics*, 12, 1287-1305, doi: 10.5194/acp-12-1287-2012.
62. Lam, N.L., Y. Chen, C. Weyant, **C. Venkataraman**, P. Sadavarte, M. Johnson, K. R. Smith, B. T. Brem, J. Arineitwe, J. E. Ellis, T. C. Bond (2012) Household light makes global heat: High black carbon emissions from simple wick kerosene lamps, *Environmental Science and Technology*, dx.doi.org/10.1021/es302697h, 2012, 46, 13531-13538.
61. Dey, L. and **C. Venkataraman** (2012) A Wet Electrostatic Precipitator (WESP) for soft nanoparticle collection, *Aerosol Science and Technology*, 46,750–759, doi: 10.1080/02786826.2012.664295.
60. Chadha, T.S., S. Chattopadhyay, **C. Venkataraman**, P. Biswas (2012) Study of the charge distribution on liposome particles aerosolized by air-jet atomization, *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 25, 355-364, doi:10.1089/jamp.2011.0967.
59. Chattopadhyay, S., S.H. Ehrman, J. Bellare, **C. Venkataraman** (2012) Morphology and bilayer integrity of small liposomes during aerosol generation by air-jet nebulisation, *Journal of Nanoparticle Research*, 14:779, doi 10.1007/s11051-012-0779-7.
58. Pawar, A.A., D.R. Chen and **C. Venkataraman** (2012) Influence of precursor solvent properties on matrix crystallinity and drug release rates from nanoparticle aerosol lipid matrices, *International Journal of Pharmaceutics* 430, 228 – 237, doi:10.1016/j.ijpharm.2012.03.030.
57. Shetty, M., A.A. Pawar, A. Mehra, **C. Venkataraman** (2012) Aerosol synthesis of lipid nanoparticles: relating crystallinity to simulated evaporation rates, *Aerosol Science and Technology*, 46, 569-575, doi:10.1080/02786826.2011.648287.
56. Pawar, A.A., **C. Venkataraman** (2011) Droplet-phase synthesis of nanoparticle aerosol lipid matrices with controlled properties, *Aerosol Science and Technology*, 45, 811-820, doi:10.1080/02786826.2011.565089.
55. Verma, S., **C. Venkataraman** and O. Boucher (2011) Attribution of aerosol radiative forcing over India during the winter monsoon to emissions from source categories and geographical regions, *Atmospheric Environment*, 45, 4398-4407, doi:10.1016/j.atmosenv.2011.05.048.
54. Chattopadhyay, S., L.B. Modesto-Lopez, **C. Venkataraman**, P. Biswas (2010) Size distribution and morphology of liposome aerosols generated by two methodologies, *Aerosol Science and Technology*, 44, 972-982, doi:10.1080/02786826.2010.498797.
53. Dandekar, P., **C. Venkataraman**, A. Mehra (2010) Pulmonary targeting of nanoparticle drug matrices, *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 23, 343-353, doi:10.1089/jamp.2009.0784.

52. **Venkataraman, C., A. Sagar, G. Habib, N. Lam and K.R. Smith (2010)** The Indian national initiative for advanced biomass cookstoves: the benefits of clean combustion, *Energy for Sustainable Development*, 14, 63–72, doi:10.1016/j.esd.2010.04.005.
51. Cherian, R., **C. Venkataraman**, A. Kumar, M.M. Sarin, A.K. Sudheer, S. Ramachandran (2010) Source identification of aerosols influencing atmospheric extinction: integrating PMF and PSCF with emission inventories and satellite observations, *Journal of Geophysical Research - Atmospheres*, doi: 10.1029/2009JD012975, 2010.
50. Stone, E. A., J. J. Schauer, B. B. Pradhan, P. M. Dangol, G. Habib, **C. Venkataraman**, and V. Ramanathan (2010) Characterization of emissions from South Asian biofuels and application to source apportionment of carbonaceous aerosol in the Himalayas, *Journal of Geophysical Research - Atmospheres*, 115, D06301, doi:10.1029/2009JD011881.
49. Cherian, R., **C. Venkataraman**, and S. Ramachandran (2009) Temporal variability in emission category influence on organic matter aerosols in the Indian region, *Geophysical Research Letters*, 36, L06809, doi: 10.1029/2008GL036311.
48. B. Mehta, **C. Venkataraman**, M. Bhushan and S.N. Tripathi (2009) Identification of sources affecting fog formation using receptor modeling approaches and inventory estimates of sectoral emission, *Atmospheric Environment*, 43, 1288–1295, doi:10.1016/j.atmosenv.2008.11.041.
47. Parvez, S., **C. Venkataraman**, and S. Mukherji (2009) Nature and prevalence of non-additive effects in industrially relevant mixtures of organic chemicals, *Chemosphere*, 75(11), 1429-1439, doi:10.1016/j.chemosphere.2009.03.005.
46. Parvez, S., **C. Venkataraman** and S. Mukherji (2008) Toxicity assessment of organic contaminants: evaluation of mixture effects in model industrial mixtures using 2n full factorial design, *Chemosphere*, 73, 1049–1055, doi:10.1016/j.chemosphere.2008.07.078.
45. Habib, G., **C. Venkataraman**, T.C. Bond, J.J. Schauer (2008) Chemical, microphysical and optical properties of primary particles from the combustion of biofuels, *Environmental Science and Technology*, 42, 8829–8834, doi: 10.1021/ es800943f.
44. Verma, S., **C. Venkataraman** and O. Boucher (2008) Origin of surface and columnar INDOEX aerosols using source- and region-tagged emissions transport in a general circulation model, *Journal of Geophysical Research-Atmospheres*, 113, D24211, doi:10.1029/2007JD009538.
43. Parvez, S., **C. Venkataraman** and S. Mukherji (2008), Toxicity assessment of organic pollutants: reliability of bioluminescence inhibition assay and univariate QSAR models using freshly prepared vibrio fischeri, *Toxicology in Vitro*, 22, 1806–1813, doi:10.1016/j.tiv.2008.07.011.
42. Bhanuprasad, S.G., **C. Venkataraman**, M. Bhushan (2008) Source identification using positive matrix factorization and trajectory modelling: a new look at the INDOEX ship-observations, *Atmospheric Environment*, 42 (2008) 4836–4852, doi:10.1016/ j.atmosenv.2008.02.041.

41. Verma, S., **C. Venkataraman**, O. Boucher, and S. Ramachandran (2007) Source evaluation of aerosols measured during the Indian Ocean experiment using combined chemical transport and back trajectory modeling, *Journal of Geophysical Research-Atmospheres*, 112, D11210, doi:10.1029/2006JD007698.
40. Kanishtha T., R. Banerjee, **C. Venkataraman** (2006) Effect of particle emissions from biofuel combustion on surface activity of model and therapeutic lung surfactants, *Environmental Toxicology and Pharmacology*, 22, 325-333, doi:10.1016/j.etap.2006.05.003.
39. Verma, S., O. Boucher, **C. Venkataraman**, M.S. Reddy, D. Müller, P. Chazette, B. Crouzille (2006) Aerosol lofting from sea breeze during INDOEX, *Journal of Geophysical Research-Atmospheres*, 111, doi:10.1029/2005JD005953.
38. Habib, G., **C. Venkataraman**, I. Chiapello, S. Ramachandran, O. Boucher, M.S. Reddy (2006) Seasonal and interannual variability in absorbing aerosols over India derived from TOMS: relationship to regional meteorology and emissions, *Atmospheric Environment*, 40(11), 1909-1921, doi:10.1016/j.atmosenv.2005.07.077.
37. Parvez, S., **C. Venkataraman**, S. Mukherji (2006) A review on advantages of implementing the luminescence inhibition test (*Vibrio fischeri*) for acute toxicity prediction of chemicals, *Environment International*, 32, 265-268, doi: 10.1016/j.envint.2005.08.022.
36. **Venkataraman**, C., G. Habib, D. Kadamba, M. Shrivastava, J.-F. Leon, B. Crouzille, O. Boucher, D.G. Streets (2006) Emissions from open biomass burning in India: integrating the inventory approach with high-resolution Moderate Resolution Imaging Spectroradiometer (MODIS) active-fire and land cover data, *Global Biogeochemical Cycles*, 20 (2), 104, doi: 10.1029/2005GB002547.
35. Mudway, S., S. T. Duggan, **C. Venkataraman**, G. Habib, F. J. Kelly, J. Grigg (2005) Combustion of dried animal dung as biofuel results in the generation of highly redox active fine particulates, *Particle and Fibre Toxicology*, 2 (6), doi: 10.1186/1743-8977-2-6.
34. **Venkataraman**, C., G. Habib, A. Eiguren-Fernandez, A.H. Miguel and S.K. Friedlander (2005) Residential biofuels in South Asia: carbonaceous aerosol emissions and climate impacts, *Science*, 307(5714), 1424-1426, doi: 10.1126/science.1104359.
33. Bond, T.C., **C. Venkataraman**, O. Masera (2004) Global atmospheric impacts of residential fuels, *Energy for Sustainable Development*, 8(3), 20-32, doi:10.1016/S0973-0826(08)60464-0.
32. Reddy, M.S., O. Boucher, **C. Venkataraman**, S. Verma, N. Bellouin and M. Pham (2004) GCM estimates of aerosol transport and radiative forcing during INDOEX, *Journal of Geophysical Research - Atmospheres*, 109, D16205, doi:10.1029/2004JD004557.
31. Habib, G., **C. Venkataraman**, M. Shrivastava, R. Bannerji, J. Stehr and R. Dickerson (2004) New methodology to estimate biofuel consumption in India: atmospheric emissions of black carbon and sulfur dioxide, *Global Biogeochemical Cycles*, 18, GB3007, doi:10.1029/2003GB002157.

30. **Venkataraman, C.**, P. Joshi, V. Sethi, S. Kohli and M.R. Ravi (2004) Aerosol and carbon monoxide emissions from low temperature combustion in a sawdust packed-bed stove, *Aerosol Science and Technology*, 38, 50-61, doi:10.1080/02786820490247614.
29. Swain, A.K., R. Rastogi, S. Mukherji and **C. Venkataraman** (2003) Emission factors of PM_{2.5} and associated polycyclic aromatic hydrocarbons from biofuel combustion, *Bulletin of the Indian Aerosol Science & Technology Association*, 15, 10-17.
28. Franke, K., A. Ansmann, D. Mueller, F. Althausen, **C. Venkataraman**, M.S. Reddy, F. Wagner and R. Scheele (2003) Optical properties of the Indo-Asian haze layer over the tropical Indian Ocean, *Journal of Geophysical Research - Atmospheres*, 108(D2), AAC 16-1 to 16-17, doi:10.1029/2002JD002473.
27. Boucher, O., C. Moulin, S. Belviso, O. Aumont, L. Bopp, E. Cosme, R. von Kuhlmann, M. Lawrence, M. Pham, M.S. Reddy, **C. Venkataraman** (2003) DMS atmospheric concentrations and sulphate aerosol indirect radiative forcing: a sensitivity study to the DMS source representation and oxidation, *Atmospheric Chemistry and Physics*, 3, 49-65, doi:10.5194/acp-3-49-2003.
26. **Venkataraman, C.**, C.K. Reddy, S. Josson and M.S. Reddy (2002) Aerosol chemical and size characteristics at Mumbai, India, during the INDOEX-IFP (1999) *Atmospheric Environment*, 36(12), 1979-1991, doi:10.1016/S1352-2310(02)00167-X.
25. Reddy, M.S. and **C. Venkataraman** (2002) Inventory of aerosol and sulphur dioxide emissions from India: II – biomass combustion, *Atmospheric Environment*, 36 (4), 699-712, doi: 10.1016/S1352-2310(01)00464-2.
24. Reddy, M.S. and **C. Venkataraman** (2002) Inventory of aerosol and sulphur dioxide emissions from India: I – fossil fuel combustion, *Atmospheric Environment*, 36 (4), 677-697, doi: 10.1016/S1352-2310(01)00463-0.
23. Mukherji, S., A.K. Swain and **C. Venkataraman** (2002) Comparative mutagenicity assessment of aerosols in emissions from biofuel combustion, *Atmospheric Environment*, 36, 5627-5635, doi:10.1016/S1352-2310(02)00690-8.
22. **Venkataraman, C.**, G. Negi, S.B. Sardar and R. Rastogi (2002) Size-distributions of polycyclic aromatic hydrocarbons in aerosol emissions from biofuel combustion, *Journal of Aerosol Science*, 33(3), 507-518, doi:10.1016/S0021-8502(01)00185-9.
21. Reddy, M.S., O. Boucher and **C. Venkataraman** (2002) Seasonal carbonaceous aerosol emissions from open biomass burning in India, *Bulletin of the Indian Aerosol Science & Technology Association*, 14, 239-243.
20. **Venkataraman, C.** and G.U.M. Rao (2001) Emission factors of carbon monoxide and size-resolved aerosols from biofuel combustion, *Environmental Science and Technology*, 35, 2100-2107, doi: 10.1021/es001603d.

19. **Venkataraman, C.,** P.K. Sinha and S. Bammi (2001) Sulphate aerosol size distributions at Mumbai, India, during the INDOEX-FFP (1998) *Atmospheric Environment*, 35, 2647-2655, doi:10.1016/S1352-2310(00)00440-4.
18. **Venkataraman, C.,** A. Mehra and P. Mhaskar (2001) Mechanisms of sulphate aerosol production in clouds: effect of cloud characteristics and season in the Indian region, *Tellus – Series B*, 53B, 260-272, doi: 10.1034/j.1600-0889.2001.01015. x.
17. Kulkarni, P. and **C. Venkataraman** (2000) Atmospheric polycyclic aromatic hydrocarbons in Mumbai, India, *Atmospheric Environment*, 34, 2785-2790, doi:10.1016/S1352-2310(99)00312-X.
16. Reddy, M.S. and **C. Venkataraman** (2000) Atmospheric optical and radiative effects of anthropogenic aerosols from India, *Atmospheric Environment*, 34, 4511-4523, doi:10.1016/S1352-2310(00)00105-9.
15. Reddy, M.S. and **C. Venkataraman** (1999) Direct radiative forcing from anthropogenic carbonaceous aerosols over India, *Current Science*, 76, 101-107.
14. **Venkataraman, C.,** B. Chandramouli and A. Patwardhan (1999) Anthropogenic sulphate aerosol from India: estimates of burden and direct radiative forcing, *Atmospheric Environment*, 33, 3225-3235, doi: 10.1016/S1352-2310(98)00140-X.
13. **Venkataraman, C.,** S. Thomas and P. Kulkarni (1999) Size distributions of polycyclic aromatic hydrocarbons – gas/particle partitioning to urban aerosols, *Journal of Aerosol Science*, 30(6), 759-770, doi:10.1016/S0021-8502(98)00761-7.
12. **Venkataraman, C.** and A.S. Kao (1999) Comparison of particle lung doses from the fine and coarse fractions of urban PM-10 aerosols, *Inhalation Toxicology*, 11, 151-169, doi: 10.1080/089583799197221.
11. **Venkataraman, C.** and J. Raymond (1998) Estimating the lung-deposition of particulate polycyclic aromatic hydrocarbons associated with multimodal urban aerosols, *Inhalation Toxicology*, 10, 183-204, doi:10.1080/089583798197727.
10. Thomas, S. and **C. Venkataraman** (1997) Polycyclic aromatic hydrocarbons in Mumbai air at Saki Naka, *Bulletin of the Indian Aerosol Science & Technology Association*, 10, 3-17.
9. Hidy, G.M., and **C. Venkataraman** (1996) The chemical mass balance method for estimating atmospheric particle sources in Southern California, *Chemical Engineering Communications*, 151, 187-209, doi:10.1080/00986449608936548.
8. Kao, A.S., and **C. Venkataraman** (1995) Estimating the contribution of re-entrainment to the atmospheric deposition of dioxin, *Chemosphere*, 31(10), 4317-4331 doi: 10.1016/0045-6535(95)96880-C.

7. **Venkataraman C.** and S.K. Friedlander (1994) Source resolution of fine particulate polycyclic aromatic hydrocarbons using a receptor model adapted for reactivity, *Journal of the Air and Waste Management Association*, 44, 1103-1108, doi:10.1080/10473289.1994.10467306.
6. **Venkataraman C.** and S.K. Friedlander (1994) Size distributions of polycyclic aromatic hydrocarbons and elemental carbon: II. ambient measurements and effects of atmospheric processes, *Environmental Science and Technology*, 28(4), 563-572, doi: 10.1021/es00053a006
5. **Venkataraman, C.,** J.M. Lyons and S.K. Friedlander (1994) Size distributions of polycyclic aromatic hydrocarbons and elemental carbon: I. sampling, measurement methods and source characterization, *Environmental Science and Technology*, 28(4), 555-562, doi: 10.1021/es00053a005.
4. Lyons, J.M., **C. Venkataraman**, H.H. Main and S.K. Friedlander (1993) Size distributions of trace metals in the Los Angeles atmosphere, *Atmospheric Environment*, 27B (2), 237-249, doi:10.1016/0957-1272(93)90009-U.
3. Joshi, V., **C. Venkataraman** and D. Ahuja (1991) Thermal performance and emission characteristics of heavy biofuel stoves with flues, *Pacific and Asia Journal of Energy*, 1, 1-19.
2. Joshi, V., **C. Venkataraman** and D.Ahuja (1989) Emissions from burning biofuels in metal cookstoves, *Environmental Management*, 13(6), 763-772, doi:10.1007/BF01868315.
1. Ahuja, D., V. Joshi, K.R. Smith and **C. Venkataraman** (1987) Thermal performance and emission characteristics of unvented biomass-burning cookstoves: a proposed standard method for evaluation, *Biomass*, 12, 247-270, doi:10.1016/0144-4565(87)90039-4.

Books and Book Chapters

1. **Venkataraman, C.,** T. Mishra, S. Ghosh, S. Karmakar (Eds) (2018) "Climate Change Signals and Response: A Strategic Knowledge Compendium for India," Springer Nature Publishing Group, 315 pp, Singapore/New Delhi. ISBN 978-981-13-0279-4; ISBN 978-981-13-0280-0 (eBook) <https://doi.org/10.1007/978-981-13-0280-0> Library of Congress Control Number: 2018939941
2. Dave, P. N. Patil, M.Bhushan and **C. Venkataraman** (2018) "Aerosol influences of cloud modification and rainfall suppression in the South Asian Monsoon region," In "Climate Change Signals and Response: A Strategic Knowledge Compendium for India," Venkataraman, C., et al. (Eds), Springer Nature Publishing Group, Singapore/New Delhi, pp 21-38.
3. Tibrewal, K., S. Maithel and **C. Venkataraman** (2018) "A state-level methodology for estimating present-day emissions of short-lived climate pollutants from fired-brick production in India," In "Climate Change Signals and Response: A Strategic Knowledge Compendium for India," Venkataraman, C., et al. (Eds), Springer Nature Publishing Group, Singapore/New Delhi, pp 211-230.
4. Jajal, P, K. Tibrewal, T. Mishra and **C. Venkataraman** (2018) "Economic assessment of climate mitigation pathways (2015-2050) for the brick sector in India," In "Climate Change Signals and Response: A Strategic Knowledge Compendium for India," Venkataraman, C., et al. (Eds), Springer Nature Publishing Group, Singapore/New Delhi, pp 273-288.

5. **Venkataraman, C.** Atmospheric Behaviour of Polycyclic Aromatic Hydrocarbons in Urban Aerosols, In: *Aerosols: Generation and Role in Medicine, Industry and Environment*, K.S.V. Nambi and B.K. Sapra (Eds.), *Indian Aerosol Science and Technology Association, Allied Publishers: New Delhi*, 1998, pp. 281-299.

Other Publications

1. Global Burden of Disease-Major Air pollution Sources (GBD-MAPS) Working Group (2018), Burden of Disease Attributable to Major Air Pollution Sources in India, Health Effects Institute, Boston, 90 pp. https://www.healtheffects.org/system/files/GBD-MAPS-SpecRep21-India-revised_0.pdf
2. **Venkataraman, C.,** R. Cherian, S. Ramachandran, A. Kagainalkar (2011) Simulation and analysis of seasonal variability in aerosol-climate interactions over India, to the *ISRO Geosphere Biosphere Programme*, 65 pp.
3. **Venkataraman, C.** and A. Pawar (2011) Aerosol Routes for the Synthesis of Nanoparticles with Controlled Structural Properties: Application to Biodegradable Particles for Drug Delivery, to the *Department of Science and Technology*, 58pp.
4. **Venkataraman, C.** and P. Biswas (2006) Report on the International Workshop on Nanoparticle Aerosol Science and Technology, Final report to the *Indo-US Science and Technology Forum and the Department of Science and Technology*, 45 pp.
5. Boucher, O., M.S. Reddy, **C. Venkataraman**, O.P. Sharma (2004) Aerosols and the Indian Monsoons, Final Report to the *Info-French Centre for the Promotion of Advanced Research*, 45 pp.
6. Boucher, O., M. Pham, and **C. Venkataraman** (2002) Simulation of the atmospheric sulphur cycle in the Laboratoire de Météorologie Dynamique General Circulation Model: Model description, model evaluation and global and European budgets, *Note Scientifique de l'Institut PierreSimon Laplace, Paris, France*. <http://www.ipsl.jussieu.fr/poles/Modelisation/NotesSciences.htm>
7. **Venkataraman, C.,** G. Negi, G.U.M. Rao, S.B. Sardar, T. Gupta and R.Rastogi (2000) Emission Factors of Respirable Aerosols and Polycyclic Aromatic Hydrocarbons from Biofuel Combustion in Stoves (Project Contract No. 97-12 A), Final Report to the *Centre for Indoor Air Research, USA, Aerosol Research Laboratory, Centre for Environmental Science and Engineering, Indian Institute of Technology, Bombay*, 320 pp.
8. **Venkataraman, C.,** (1999) Development of a Standard Method for Measuring Polycyclic Aromatic Hydrocarbons in Respirable Aerosol Emissions from Biofuel Stoves (Project No. SP/YO/001/97), Final Report to the *Department of Science and Technology, Government of India, Centre for Environmental Science and Engineering, Indian Institute of Technology, Bombay*, 53 pp.
9. W.P.L. Carter and **C. Venkataraman** (1995) Atmospheric Ozone Formation Potential of Common Aluminum Rolling Mill Lubricant Constituents, Report to the Aluminum Company of America, CE-CERT, University of California, Riverside, USA, 46 pp.
10. W.P.L. Carter, D. Luo, I. Malkina and **C. Venkataraman** (1994) Smog-Chamber Studies of Aerosol Formation from Siloxanes, CE-CERT, University of California, Riverside, USA, 15 pp.

Selected Conference Presentations

1. Debbarma, S., Raparthi, N., Venkataraman, C. and Phuleria, H.C. (2020) Real-world traffic characterization on an inter-city expressway and its impact on air pollution emissions, 30th Annual Meeting of the International Society of Exposure Science, Oakland, California, USA (Virtual meeting), September 21-22, 2020.
2. Manwani, P., Kapoor, T.S., Venkataraman C. and Phuleria, H.C. (2020) Examining the impact of open-field biomass burning on regional air quality in North India, Poster presentation, 30th Annual Meeting of the International Society of Exposure Science, Oakland, California, USA (Virtual meeting), September 21-22, 2020.

3. Muduchuru, K. and Venkataraman, C. (2020) Spatial heterogeneity of stratiform precipitation response to aerosol fast adjustments over India: A general circulation model study with ECHAM6-HAM2, American Geophysical Union, AGU Fall Meeting, New Orleans, Louisiana, USA, December 13-17, 2020, Vol. 2020, pp. A063-0016.
4. Bhattacharya, A., Venkataraman, C., Maity, S. and Muduchuru, K. (2020) Analysis of Aerosol Life Cycles over Indian Region in the ECHAM6-HAM2, American Geophysical Union, AGU Fall Meeting, New Orleans, Louisiana, USA December 13-17, 2020, Vol. 2020, pp. A063-0003.
5. Sharma, A. and Venkataraman C. (2020) Influence of aerosol radiative effects on temperature and snow cover fraction in the Himalayan region: GCM simulations, American Geophysical Union, AGU Fall Meeting, Online, December 1-17, 2020, Vol. 2020, pp. A093-0015.
6. Tibrewal, K. and Venkataraman, C. (2020) India's climate action must include warming short-lived climate pollutants (wSLCPs), 19th GEIA Conference: The Global Emission Initiative and Accelerating Social Transformations, University of Chile, Santiago, June 23, 2020.
7. Sarkar, C., T. Kapoor, C. Venkataraman, A. Chatterjee, H. Phuleria and S.K. Ghosh (2019) Estimating brown carbon absorption using multiple methods from long-term multi-wavelength aethalometer measurements over a Himalayan site, EGU General Assembly, Vienna, April 7-12, Geophysical Research Abstracts Vol. 21, EGU2019-17306, 2019.
8. Jajal, P., Mishra, T., **Venkataraman, C.** Potential Mitigation of Indian Construction Industry through Shift in Energy Efficient Technology in India, European Geosciences Union General Assembly 2018, Poster, April 11th, 2018.
9. Davuluri, S., M. Garg, **C. Venkataraman**, H. Phuleria (2016) Carbonaceous aerosol emissions from biomass burning cook stoves in Western India. *22nd European Aerosol conference (EAC-2016), France*, September 4-9, 2016.
10. Garg, M., H. Phuleria, **C. Venkataraman** (2016) Quantification and characterization of emissions from open-field agricultural residue burning in Maharashtra. *10th International Conference on Air Quality- Science and Application, Italy*, March 14-18, 2016.
11. Jajal, P., Mishra, T., **Venkataraman, C.** Black Carbon Economic Analysis: Indian cooking and brick production Sector, 7th International Conference on Climate Change, Tata Institute of Social Science (TISS), Oral Presentation, July 30th, 2016.
12. **C. Venkataraman**, Major sources contributing to current and future fine particulate pollution in India, in the *Symposium on Global Burden of Disease from Air Pollution, Conference of the American Association for Advancement of Science, Washington D.C., USA*, February 11-15, 2016.
13. **Venkataraman, C.**, P. Sadavarte, A. Jhaldiyal (2016) Short lived climate pollutants: emissions and impacts over India., *INAE Annual Conference, Ahmedabad*, December 8-9, 2016.
14. Patil, N., **C. Venkataraman** (2016) Aerosol induced changes in regional precipitation over India. *Proceedings of the conference of Indian Aerosol Science and Technology Association*, December 6-8, 2016.
15. Patil, N., P. Dave, **C. Venkataraman** (2016) Aerosol modulation of cloud properties in contrasting years of monsoon rainfall. *Proceedings of the conference of Indian Aerosol Science and Technology Association*, December 6-8, 2016.

16. Sapra, M., V. Rai, Y.S. Mayya, **C. Venkataraman** (2016) Estimation of critical supersaturation solubilities (CSS) for predicting diameters of dry particles prepared by air-jet atomization of solutions. *Proceedings of the conference of Indian Aerosol Science and Technology Association*, December 6-8, 2016.
17. Patil, N., **C. Venkataraman** (2014) Variability in cloud microphysical properties and aerosol optical depth during contrasting Indian monsoon years. *Proceedings of the conference of Indian Aerosol Science and Technology Association*, November 11-13, 2014.
18. Sapra, M., A.A Pawar, P. Asthana, Y.S. Mayya, **C. Venkataraman**, "Aerosol synthesis of layered nanoparticles". *Conference of Indian Aerosol Science and Technology Association, Banaras Hindu University, Varanasi, India*, November 11-13, 2014.
19. Gandhi, J., Y.S. Mayya, **C. Venkataraman**, "Modeling the formation of layered nanoparticles by spray drying of solution droplets". *Conference of Indian Aerosol Science and Technology Association, Banaras Hindu University, Varanasi, India*, 11th -13th November 2014.
20. Sadavarte P. and **C. Venkataraman**, Emissions scenarios for India (2010-2050): Combining economic scenario baselines with technology-linked emissions modelling, *Workshop on Global Air Pollutant Emission Scenarios, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria*, February 11-13, 2015.
21. Sapra, M., A.A. Pawar and **C. Venkataraman**, "Aerosol synthesis of surface modified nanoparticle aerosol lipid matrices", *Aerosol Technology, Karlsruhe Institute of Technology, Karlsruhe, Germany*, June 16-18, 2014.
22. Patil, N. and **C. Venkataraman** (2014) Interannual variability in monsoon rainfall and relation to aerosol effects; Poster presentation in *1st Climate Workshop on Science and Policy, IDP Climate Studies, IIT Bombay*, March 6-7, 2014.
23. Patil, N., R. Cherian, **C. Venkataraman** (2013) Interannual variability in monsoon rainfall and relation to aerosol effects using GCM simulations; Oral presentation in *Fourth NRCCC, IIT Madras*, October 26-27, 2013.
24. Jayakrishnan, K., P. Sadavarte, N. Patil, A. Thomas, A. Kagainalkar, S. Kulkarni, G. Carmichael, **C. Venkataraman** (2013) Seasonal variability in black carbon aerosols over India using regional coupled model simulations; Poster Presentation in *Fourth ICRN-NRCCC, IIT Madras*, October 26-27, 2013.
25. Pandey, A., P. Sadavarte, A.B. Rao, **C. Venkataraman** (2013) Estimation of climate impact of energy-use activities in traditional industries. Poster Presentation in *Fourth ICRN-NRCCC, IIT Madras*, October 26-27, 2013.
26. Sarkar, M., P. Sadavarte, A. Pandey, **C. Venkataraman** (2013) Climate and clean-air impact of ozone precursor emissions from energy-use activities. Poster Presentation in *Fourth ICRN-NRCCC, IIT Madras*, October 26-27, 2013.
27. **Venkataraman, C.**, P. Sadavarte, B. L. Madhavan, S. Kulkarni, G. R. Carmichael, B. Adhikary, A. D'Allura, R. Cherian, S. Das, T. Gupta, D.G. Streets, C. Wei, Q. Zhang, Seasonal contrast in aerosol abundance over northern South Asia using a chemical transport model, Paper No. A13A-02, *American Geophysical Union Meeting, San Francisco, USA*, December, 2012.
28. Pawar, A. A., P. Asthana and **C. Venkataraman**, Aerosol synthesis of surface modified lipid nanoparticles, Abstract No. 710, in *31st Annual Conference of American Association for Aerosol Research, Minneapolis, Minnesota, USA*, 2012.

29. Chadha, T.S., S. Chattopadhyay, **C. Venkataraman**, P. Biswas, Study of the charge distribution on aerosolized liposome generated by air-jet atomization, Poster No. 5C.19, *American Association for Aerosol Research, Orlando, Florida, USA*, 2011.
30. Pawar, A. A., Chen, D. and **C. Venkataraman**, Influence of precursor solvent physical properties on drug release rates from biodegradable nanoparticle aerosol matrices, Paper No. 2.K.17, in *30th Annual Conference of American Association for Aerosol Research, Orlando, Florida, USA*, 2011.
31. Chattopadhyay, S., **C. Venkataraman**, S. Ehrman, C.Y.Chiang, L.C. Lai and W.A. Chiou, Influence on air-jet nebulisation on in-situ properties of nanometer liposome, *Asia Pacific Conf. of Chemical Engineers, Taiwan*, October 5-8, 2010.
32. Patil, N., R. Cherian, **C. Venkataraman** (2012) Relating modeled rainfall to atmospheric aerosol variables over India in GCM simulations with in-situ regional aerosols. *Proceedings of the conference of Indian Aerosol Science and Technology Association*, December 11-13, 2012.
33. Sadavarte, P., A. Pandey, **C. Venkataraman**, "Multi-pollutant emissions inventory for the residential sector in India," *Indian Aerosol Science and Technology Association, Navi-Mumbai, INDIA*, 2012.
34. Sadavarte, P., K. Kathiar, G. Nair, **C. Venkataraman**, "Climate footprint of selected Indian emission sectors", *National Research Conference on Climate Change, Indian Institute of Technology Delhi*, November 5-6, 2011.
35. Das, S., M. Bhushan, **C. Venkataraman**, G.R. Carmichael, S. Kulkarni, "Data assimilation using optimal interpolation: Correcting chemical transport model predictions with satellite observations", *National Research Conference on Climate Change, Indian Institute of Technology Delhi*, November 5-6, 2011.
36. Cherian, R., **C. Venkataraman**, S. Ramachandran, and J. Quaas (2010) Aerosol transport during the ICARB using the ECHAM-HAM general circulation model, *Proceedings of the conference of the Indian Aerosol Science and Technology Association*, March 24-26, 2010.
37. Chattopadhyay, S., **C. Venkataraman**, and P. Biswas (2010) Nanoparticle aerosol generation from liposome suspensions. *Indian Aerosol Science and Technology Association, March 24-26, Darjeeling, INDIA*, 2010.
38. Pawar, A. A. and **C. Venkataraman**, Synthesis of solid lipid nanoparticles in a low temperature aerosol reactor (LoTAR), *Conference of Indian Aerosol Science and Technology Association, Bose Institute, Darjeeling, India*, 2010.
39. Pawar, A. A., T.S.Chadha, **C. Venkataraman** and A. Mehra, Synthesis of solid lipid nanoparticles with hydrophilic cores in a low temperature aerosol reactor (LoTAR), *Conference of Indian Aerosol Science and Technology Association, Bose Institute, Darjeeling, India*, 2010.
40. Sadavarte, P., **C. Venkataraman**, S. Kulkarni, G. Carmichael, K. Sharma and A. Kaginalkar (2010) Aerosol transport and atmospheric extinction over India using the STEM model, *Proceedings of the conference of the Indian Aerosol Science and Technology Association*, March 24-26, 2010.
41. Chattopadhyay, S., L.B.Modesto-Lopez, **C. Venkataraman** and P.Biswas, Aerosolization of nanometer-sized liposome suspension by electrospray, Poster No. 7A.05, *American Assoc for Aerosol Research, MN, USA* October 26-30, 2009.
42. Chattopadhyay, S., **C. Venkataraman**, S. Ehrman, and J. Bellare, Aerosol delivery of nanometer sized liposome suspensions, Poster No. 7A.04, *American Association for Aerosol Research, MN, USA*, October 26-30, 2009.

43. Chattopadhyay, S., **C.Venkataraman**, Sheryl Ehrman and Jayesh Bellare, Aerosol delivery of nanometer sized liposome suspensions, Poster paper 7A.04, *Annual conference of the American Association for Aerosol Research, Minneapolis, MN*, October 24-27, 2009.
44. Chattopadhyay, S., Luis Balam Modesto-Lopez, **C.Venkataraman** and Pratim Biswas, Aerosolization of nanometer-sized liposome suspension by electrospray, Poster paper 7A.05, *Annual conference of the American Association for Aerosol Research, Minneapolis, MN*, October 26-30, 2009.
45. Parvez, S., **C. Venkataraman** and S. Mukherji, Statistical tools for studying component effect and interactions in chemical mixtures, *Society for Risk Analyst (SRA), Annual Meeting, Boston, USA*, December 7-10, 2008 (Platform Presentation).
46. Mukherji, S., Parvez, S., and **C. Venkataraman**, "Toxicity characterization of hydrophobic organic compound mixtures based on concentration addition and independent action models" *5th SETAC World Congress, Sydney, Australia, organized by The Society for Toxicology and Chemistry*, August 3-7, 2008, (Platform Presentation).
47. Chattopadhyay S, **C. Venkataraman**, J.Bellare, S.Ehrman, Nano-sized liposomes for pulmonary drug delivery, *2nd Bangalore Nano Conference, Bangalore, INDIA*, December 11-13, 2008.
48. Parvez, S., **C. Venkataraman**, and S. Mukherji "Full factorial design and toxicity interpretation for a chemical mixture" *International Conference on Ecotoxicology and Environmental Sciences (ICEES-2007), Indian Institute of Chemical Engineers, Kolkata*, Paper in Conference Proceedings. January 15-18, 2007.
49. Mehta B., **C. Venkataraman**, M. Bhushan and Sachchida Nand Tripathi (2007) Matrix factorization modeling for aerosol source identification: Application to field data from Kanpur during the ISRO-GBP LC-II, *Proceedings of the conference of the Indian Aerosol Science and Technology Association*, November 14-16, 2007.
50. Ribu Cherian, S. Ramachandran, **C. Venkataraman**, M.S. Reddy and O. Boucher (2007), Interannual variability of aerosols in the Indian region during 1996-1999 using general circulation modeling and potential source contribution function, *Proceedings of the conference of the Indian Aerosol Science and Technology Association*, November 14-16, 2007.
51. Parvez, S., **C. Venkataraman**, and S. Mukherji "Toxicity estimation of 2, 3 and 4 component mixture of HOCs and interpretation of interaction effects" *11th International Congress of Toxicology (ICT-2007), Montreal, Canada, organized by The Society of Toxicology of Canada and National Research Council, Canada*, July 15-19, 2007, (Poster Presentation).
52. **Venkataraman, C.**, S.G. Bhanuprasad, Mani Bhushan, Sarika Kulkarni And Gregory R. Carmichael (2007) Source Identification Using Matrix Factorization and Trajectory Based Receptor Models Combined with Chemical Transport Approaches: A New Look at the INDOEX Ship-observations, Invited paper No. AS12-A0012, *Proceedings of the conference of the Asia Oceania Geophysical Society, AOGS-2007, Bangkok*, July 31-August 4, 2007.
53. Kanishtha, T., Banerji, R. and **Venkataraman, C.** (2005) Inhibitory effects of urban ambient particles on lung surfactant monolayers, Paper IC-I99, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 161-162.
54. Verma, S., **C. Venkataraman** and O. Boucher (2005) Geographical and source origins of INDOEX aerosols, Paper IVB-I65, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 281-283.
55. Verma, S, O. Boucher, **C. Venkataraman**, M.S. Reddy, D. Mueller, P. Chazette, B. Crouzille, B (2005) Interaction of sea-breeze with the winter-monsoon flow on the west coast of India: Potential mechanism for

aerosol lofting, Paper IXA-I66, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 569-570.

56. Shanker, U., A. Xiu, D. Streets, J. Vukovich, M.S. Reddy, **C. Venkataraman**, R. Mathur, A. Hanna, F.S. Binkowski, S. Arunachalam (2005) Evaluation of a couples meteorology-chemistry model against INDOEX observations, Paper IVC-O50, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 292-293.

57. Reddy, M.S., P. Ginoux, V. Ramaswamy, **C. Venkataraman** and S. Verma (2005) Seasonal aerosol loads over the Indian Ocean and their radiative impacts, Paper IVC-O47, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 294-295.

58. **Venkataraman, C.**, G. Habib, D. Kadamba, J-F Leon, B. Crouzille, O. Boucher, M.S. Reddy, M. Shrivastava, D.G. Streets (2005) Emissions from forest and crop waste burning in India, Paper VIIA-I38, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 447-448.

59. Wagh, B., J. Bellare, **C. Venkataraman** (2005) Surface growth and microstructure analysis of biofuel combustion aerosols, Paper XB-I36, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 670-672.

60. Habib, G., **C. Venkataraman**, T.C. Bond, A.H. Miguel, A. Eiguren-Fernandez, J.J. Schauer, S.K. Friedlander (2005) Relation of chemical composition and radiation absorption with the size distribution of aerosol emissions from biofuel combustion, Paper XB-I22, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 695-697.

61. Dalvi, M., O. Boucher, A. Kaginalkar, G. Habib, **C. Venkataraman** (2005) Parallel “offline” aerosol chemistry general circulation model (LMD-ZT), Paper IVC-I48, *Proceedings of the Fourth Asian Aerosol Conference, Mumbai*, December 13-16, 2005, pp 296-297.

62. Habib, G., **C. Venkataraman**, A. Eiguren-fernandez, A. H Miguel, T.C. Bond, S. K. Friedlander, Carbonaceous constituents and radiation absorption of aerosols emitted from biofuel combustion, *Proceedings of the conference of the Indian Aerosol Science and Technology Association, Indian Institute of Technology Kanpur, India*, November 15-17, 2004.

63. Habib, G., **C. Venkataraman**, I. Chiapello, S. Ramachandran, Olivier Boucher, M. Shekar Reddy, Long term variability in absorbing aerosol loading over India detected by TOMS, *Proceedings of the Conference of the Indian Aerosol Science and Technology Association, Indian institute of Technology Kanpur, India*, November 15-17, 2004.

64. **Venkataraman, C.**, G. Habib, B. Crouzille, J. –F. Leon, M.S. Reddy, O. Boucher, D.G. Streets, M. Shrivastava, D. Kadamba, Seasonal distributions in black carbon and carbon monoxide emissions from biomass burning in India, *Proceedings of the Conference of the Indian Aerosol Science and Technology Association, Indian Institute of Technology Kanpur, India*, November 15-17, 2004.

65. Parvez, S., **C. Venkataraman**, S. Mukherji (2004) Bioluminescence inhibition in vibrio fischeri in response to toxic chemicals – studies with a MTCC strain, *ENVIROVISION 2004*, Pune, November 15-17, 2004.

66. Parvez, S., **C. Venkataraman**, S. Mukherji (2004) Bioluminescence inhibition assays for acute toxicity testing, *Workshop on Marine Pollution and Ecotoxicology, National Institute of Oceanography, Dona Paula, Goa*, February 22-24, 2004.

67. Verma, S., **C. Venkataraman**, O. Boucher, M.S. Reddy, D. Muller, B. Crouzille (2004) Sea-breeze effects on lofting and vertical distribution of aerosols, *Workshop on Tropospheric Chemistry and Aerosols, Physical Research Laboratory, Ahmedabad*, March 25-26, 2004.

68. Habib, G., **C. Venkataraman**, A. Eiguren-Fernandez, A. H Miguel, S.K. Friedlander, J. Schauer, T. C. Bond (2004) Chemical composition and radiation absorption of aerosol emissions from biofuel combustion: Implications for regional climate, *Annual meeting of American Association for Aerosol Research, Hyatt Regency Atlanta, Georgia, USA*, October 4-8, 2004.

69. Mudway, I.S., S.T. Duggan, **C. Venkataraman**, F.J. Kelly and J.M. Grigg (2004) Particulates derived from the burning of biomass fuels display considerable levels of intrinsic oxidative activity, *Annual Meeting of the European Respiratory Society, Glasgow, U.K.* April 12-14, 2004.

Plenary, Keynote, Invited Lectures

- Invited Lecture: “Tiny particles and colossal climate change: Where are the links?” IMPRESS-2024, Indian Institute of Geomagnetism, Mumbai, Feb 15, 2024.
- Plenary Lecture: “The COALESCE network: Unravelling aerosol effects on climate and air pollution in India,” The Conference of the Indian Aerosol Science and Technology Association, Mumbai, Dec 12-15, 2023.
- Invited Lecture: “Aerosol influences on temperature, cloud properties and rainfall over India,” Workshop on Climate Studies, International Centre for Theoretical Sciences, Bengaluru, March 1-3, 2022.
- Keynote Lecture: “Air pollution in India: Building evidence on emissions sources, climate feedback and population impacts,” International Conference on Environmental Science and Engineering, Mumbai, Jan 20-22, 2022.
- Invited Panelist, “What’s polluting India’s Air,” The Council for Energy, Environment and Water Parishad, New Delhi, October 5, 2021.
- Invited Lecture, “Climate co-benefits of air quality and clean energy policy in India,” India-EU Knowledge and Technical Exchange on Low Carbon Modelling Tools, New Delhi, July 1-2, 2021.
- Invited lecture: “Dominance sources and sectors influencing India’s air quality: mitigation opportunities and needs,” India International Science Festival, Pune, December 24, 2020.
- Invited Lecture: “From nanometer to global scales: Aerosol influences on temperature, clouds and rainfall over India, International conference on Earth’s Changing Climate: Past, Present and Future, Bengaluru, October 13, 2020.
- Invited Lecture, “Understanding and managing air quality in India: Progress, gaps and needs,” Vaishvik Bhartiya Vaigyanik (VAIBHAV) Summit: Theme of Air Pollution, New Delhi, October, 12, 2020.
- Keynote talk, “Chasing the thrill of discovery: A personal journey in science,” Celebrating women in science and technology, Initiative for gender equity and sensitization, Indian Institute of Technology Delhi, March 13, 2019.
- Plenary lecture, “Factors influencing recent monsoon rainfall trends over India: Aerosols or ocean warming?” International conference on understanding predicting and projecting climate change over the Asian region, National Atmospheric Research Laboratory, Gadanki, June 26-28, 2017.
- Overview talk, “Aerosol Emissions: Inventory Status and Gaps for India,” DST National Workshop on "Aerosols: Science and Applications," National Network Programme on Climate Change and Aerosols, IIT Kanpur, May 11-12, 2017.
- Plenary lecture, “Influences of coincident aerosols on cloud properties and intra-seasonal suppression of summer monsoon rainfall,” International Conference on Aerosols and the Climate Change Connection, Bose Institute, Darjeeling, April 25-27, 2017.
- Brainstorming workshop on environmental regulation and air pollution in India, “Seeking synergy in air quality and climate interventions,” ATREE, Bengaluru – 16th March, 2018.

- Pre-release Workshop: A new comprehensive Analysis and Report of Indian Air Pollution Levels, Sources and Health Effects, “Source influence on emission pathways and ambient PM-2.5 pollution over India (2015-2050),” India Habitat Centre, New Delhi, Jan 11, 2018.
- Indo-Dutch International Workshop on Climate and Atmospheric Science and Applications, “Short lived climate pollutants: Emissions and climate effects over India,” Indian Institute of Technology Delhi, 20-21 Feb, 2017.
- International Workshop on Assessing the Impact of Aerosols & Changing Climate on Monsoon & Extreme Events, “Mesoscale modulation of clouds and rainfall by aerosols over India,” Ansal University, Gurgaon, January 12-14, 2015.
- Plenary lecture, “Major sources contributing to the burden of disease from fine particulate pollution in India.” Conference of the Indian Aerosol Science and Technology Association, Physical Research Laboratory, Ahmedabad, India. December 6-8, 2016.
- “Anthropogenic aerosol induced changes in extinction, atmospheric heating and precipitation over India,” Environmental Engineering Seminar Series, University of California, Berkeley, USA, March 15, 2013.
- “A technology-based multi-pollutant inventory of Indian energy-use emissions.” Lawrence Berkeley Laboratory, Environmental Energy Technologies Division, Berkeley, USA, Jan 29, 2013.
- “Energy-use emissions, aerosol chemistry and climate effects in south Asia,” Atmosphere Energy Seminar Series, Stanford University, Stanford, USA, October 9, 2012.
- UNEP South Asia Consultation on Black Carbon, “Sectoral black carbon emissions from India,” Kathmandu, March 21-23, 2011.
- Author Workshop, Bounding the global climate effects of black carbon: A scientific assessment, NOAA-ESRL, Boulder, Colorado, USA, July 2009 and August 2011.
- Plenary lecture, “Aerosol source-receptor relationships in the context of climate: An Indian region perspective,” Plenary talk at the conference of the Indian Aerosol Science and Technology Association, Darjeeling, March 24-26, 2010.
- Plenary Lecture, “Using source-receptor relationships to better understand aerosol-climate interactions: From challenge to opportunity,” International Aerosol Conference, 2010, Helsinki, Finland, August 28-September 3, 2010.
- Plenary lecture, “Toward aerosol budgets: Modelling approaches to identify geographical region of origin of aerosols,” Conference on Aerosol Chemistry Climate Interactions, 60th Anniversary Symposium of the Physical Research Laboratory, Ahmedabad, November 20-22, 2007.
- “Climate mitigation co-benefits of clean biomass energy technologies for cooking,” Invited talk at the annual meeting of the South Asia Network of Development and Environmental Economists, Bangkok, Thailand, January 12-13, 2008.
- “Aerosol Emissions from India and Mechanisms of Long-Range Transport during the INDOEX,” September 12, 2005, U.S. Environmental Protection Agency, Office of Air Quality and Policy Studies, Durham, North Carolina, USA.
- “Pollution Particles over South Asia: Emission sources, transport and radiative effects,” October 6, 2005, Department of Chemical and Biochemical Engineering, University of Iowa, Iowa City, USA.
- “Sources and transport mechanisms of atmospheric aerosols in the Indian region,” October 14, 2005, Department of Chemical Engineering and the Environmental Engineering Science Program, Washington University, St. Louis, USA.
- “Source-receptor reconciliation of INDOEX aerosols,” November 19, 2005, Centre for Clouds Chemistry and Climate, The Scripps Institution of Oceanography, University of California, San Diego, USA.
- “Dirty combustion and clean development: can soot put traditional residential cooking on the climate agenda?” January 25, 2005, The Energy and Resources Institute, New Delhi.

- “Sources and transport mechanisms of atmospheric aerosols in the Indian region,” October 14, 2005, Department of Chemical Engineering and the Environmental Engineering Science Program, Washington University, St. Louis, USA.
- “Aerosol Emissions from India and Mechanisms of Long-Range Transport during the INDOEX,” September 12, 2005, U.S. Environmental Protection Agency, Office of Air Quality and Policy Studies, Durham, North Carolina, USA.
- Black Carbon Emissions and Climate Change: US EPA Technical Workshop, “Uncertainties in black carbon emissions and model predictions: A South Asian perspective.” San Diego California, USA, October 13 – 15, 2004.
- Atmospheric Brown Cloud: Science Team Meeting and South Asia Workshop on Air Pollution, Aerosols and Regional Impacts, “Regional Emissions Estimates,” and “Aerosol Emissions from Small Biomass Fires.” February 2-4, 2004, TERI, New Delhi, lectures titled,
- Indo-US Workshop on Modelling Atmospheric Transport of Pollutants, “Source and species contributions to aerosol distributions during the Indian north-east winter monsoon” November 11-13, 2003, NEERI, Nagpur,
- Task Force on Hemispheric Transport of Air Pollutants: Emissions Inventory and Future Projections Workshop, “Emissions from Residential Energy Use: Key Uncertainties,” 18-20 October, 2006, Beijing, China.
- Planning Workshop of the International Global Atmospheric Chemistry project, January 27-30, 2002, International Meteorological Institute, Stockholm University, Stockholm, Sweden.
- “Indian Ocean Experiment: Surface Aerosol Characteristics and Emissions Inventory,” at Laboratoire de Meteorologie Dynamique, Paris, France, May 17th, 2001.
- “Aerosol Emissions and Radiative Effects: INDOEX Related Studies,” at the Max Planck Institute for Chemistry, Mainz, Germany, May 23rd, 2001.
- “Biofuel Combustion Emissions: Aerosols, Polycyclic Aromatic Hydrocarbons and Mutagenicity,” at the Max Planck Institute for Chemistry, Mainz, Germany, June 5th, 2001.
- “Direct- and Indirect-acting Mutagenic Constituents of Fine Particulate Matter Emissions from Biofuel Combustion,” at the Fraunhofer Institute for Toxicology and Aerosol Research, Hannover, Germany, June 11th, 2001.
- International Workshop on Tropical Environmental Problems, October 9-13, 2000, Himalayan Bioresource Institute, Palampur, India.
- International INDOEX Workshop, September 5-8, 1999, University of Utrecht, Utrecht, The Netherlands.
- IGAC/DEBITS Workshop on Composition and Acidity of Asian Precipitation, November 11-15, 1998, Chulalongkorn University, Bangkok, Thailand.
- Indo-British Environment Training Project, “Air Pollutants and their Implications in Local, Regional and Global Atmospheres,” Centre for Environmental Science and Engineering, Indian Institute of Technology, Bombay, February 10-21, 1998.
- “Principles of Receptor Modelling,” California State University, San Jose, USA, December 2, 1993.

Peer Review Responsibilities

Proposals: The Science and Engineering Research Board and Department of Science and Technology, Government of India.

Journals: Atmospheric Environment, Journal of Geophysical Research – Atmospheres, Tellus – Series B, Aerosol Science and Technology, Environmental Science and Technology.