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Name	:	Anil D. Bhanarkar
Designation	:	Senior Principal Scientist
Institute	:	CSIR-NEERI, Nagpur
Education	:	M.E. (Chem. Tech)
Division	:	Air Pollution Control Division
Research Area/ Specialisation	:	Air Quality Management

Major projects handled

1. PM₁₀ & PM_{2.5} Source Apportionment Study and development of Emission Inventory of twin cities Kolkata & Howrah of West Bengal.
2. Impact of Diesel Particulate Matter in Ambient Air on Health of Employees Deployed in Opencast Mines of WCL.
3. Study of Ambient Air Quality from Transportation of coal along Railway Route from Ghugus railway siding to MAHAGENCO, Chandrapur.
4. Short term and localized air pollution control system for crematoria, dump site and others in Delhi.
5. Human Health Assessment Study to Assess the Air Pollution & Health Impacts at Wada Plant of M/s Saint-Gobain India Pvt. Ltd., Palghar, Maharashtra
6. Ambient Air Quality and Noise level Management Study for M/s. Ambuja Cement Ltd. (ACL), Himachal Pradesh.
7. Performance Evaluation of Air Pollution Control System (APC) at Uttam Galva Metalics Ltd, Wardha.

8. Performance Evaluation of Air Pollution Control System (APC) at Sunflag Iron and Steel Co. Ltd. Works, Bhandara.
9. Performance Evaluation of Air Pollution Control System (APC) at Raymond UCO Denim Pvt. Ltd, Yavatmal.
10. Study of characterization of flue gas emission from point source and abatement measures for sulphur dioxide at 1x210 MW and 1x500MW units of Khaparkheda thermal power station (KKPTS), Nagpur.
11. Stack Monitoring and performance of Air Pollution Control Systems in Uttam Value Steel Ltd., Wardha.
12. Study on Development and application of GAINS-City Model for Indian Cities, Sponsored by TIFAC, New Delhi, (2013-2015).
13. Environmental Assessment Study Before and After the Proposed Urban Conservation and Tourism Development Project of Area around the World Heritage Site , Taj Mahal, Agra, Sponsored by UP Tourism Department, Lucknow, (2013-2015).
14. Macro Level EIA Study for Clusters of Iron Ore Mines in the State of Goa, Sponsored by Department of Mines, Goa, (2013-2015).
15. National Clean Air Mission WP3 (Task/Activity T3.1) Industry Specific Green Environmental Technology Package (GETP) for Highly Air Polluting Industries for representative SMEs in and around Nagpur Sponsored by CSIR, New Delhi, (2012-2017).
16. Review of Emission Standards and Preparation of Comprehensive Industry Document (COINDS) on Manmade Fibre Industry, Sponsored by CPCB (2010-2015).
17. Estimation of Fugitive Emissions and Source Apportionment Studies to Assess the Impact of Various Operations on Ambient Air Quality at Bhilai Steel Plant (BSP), Bhilai, Sponsored by SAIL- BSP, (2010-2015).
18. Air Quality Monitoring, Emission Inventory and Source Apportionment Studies at Delhi, Sponsored by CPCB, (2007-2010).
19. Measures in Relation to Unintentionally Produced POPs in Central & Western India, Sponsored by UNIDO/MOEF, (2008-2010)
20. Comprehensive performance Evaluation of management systems at M/s Jindal SAW Ltd., Samoghoga, Bhuj, Sponsored by JSL, Bhuj, (2007-2009).
21. Performance evaluation studies of environment management systems of Gujarat Electricity Board (GEB), Gandhinagar
22. Estimation of fugitive emissions of SO₂ and evaluation of double hood system to be installed at copper smelter of Sterlite Industries (India) Limited, Thoothukkudi

23. National Clean Air Mission Sponsored by CSIR, New Delhi, (2012-2017).
24. Carrying Capacity Study for Environmental Sustainable Iron Ore Mining Activity in Keonjhar, Sundargarh, and Mayurbhanj District of Orissa State Sponsored by MoEF, New Delhi, (2014-2016).
25. Environmental Audit at M/s Harihar Alloy Pvt Ltd., Forging Division, Trichy Sponsored by M/s Harihar Alloy Pvt Ltd., Forging Division, Trichy, (2014-2015).
26. Stack Emission Monitoring & assessment of Air Pollution at M/s Jubilant LifeSciences Ltd, Pune, Sponsored by M/s Jubilant LifeSciences Ltd, Pune, (2014-2015).
27. Monitoring & assessment of environmental pollution status at M/s Nitta Gelatin (India) Ltd., Kathikudam, Dist. Trichur, Kerala, Sponsored by M/s Nitta Gelatin India Ltd., Kathikudam, (2013-2015).
28. Preparation of Initial Assessment Report on Air Pollution from M/s Athiappa Chemicals Pvt Ltd Mettupalayam, Pudducherry, Sponsored by Athiappa Chemicals Ltd, Pudduchery, (2013-2015).
29. Monitoring of Air, Water and Atmospheric Pollution of BPCL Kochi Refinery, Ambalamugal (2014-2015)

Publications

1. **Anil D. Bhanarkar**, Pallav Purohit, Peter Rafaj, Markus Amann, Imrich Bertok, Janusz Cofala, Padma S. Rao, B. Harsha Vardhan, Gregor Kiesewetter, Robert Sander, Wolfgang Schöpp, Dipanjali Majumdar, Anjali Srivastava, Swapnil Deshmukh, Amit Kawarti, Rakesh Kumar
Managing future air quality in megacities: Co-benefit assessment for Delhi
Atmospheric Environment Vol. 186 (2018) pp.158–177
2. Markus Amann, Pallav Purohit*, **Anil D. Bhanarkar**, Imrich Bertok, Jens Borken-Kleefeld, Janusz Cofala, Chris Heyes, Gregor Kiesewetter, Zbigniew Klimont, Jun Liu, Dipanjali Majumdar, Binh Nguyen, Peter Rafaj, Padma S. Rao, Robert Sander, Wolfgang Schöpp, Anjali Srivastava, B. Harsh Vardhan
Managing future air quality in megacities: A case study for Delhi
Atmospheric Environment, Vol. 161, pp. 99–111, 2017, (I.F:3.629).
3. Gregor Kiesewetter, Pallav Purohit, Wolfgang Schoepp, Jun Liu, Markus Amann, and **Anil Bhanarkar**
Source attribution and mitigation strategies for air pollution in Delhi

- EGU General Assembly 2017(Vienna, Austria)*, Vol. 19, EGU2017-16796, 2017
4. V. V. Khaparde*, **A. D. Bhanarkar**, Deepanjan Majumdar, C. V. Chalapati Rao
Characterization of Polycyclic Aromatic Hydrocarbons in fugitive PM10 emissions from an integrated iron and steel plant
Science of Total Environment, Vol. 562, pp. 155–163, 2016, (I.F:4.099).
 5. P.V. Suryawanshi, B.S. Rajaram, **A.D. Bhanarkar***, C.V.C. Rao
Determining Toxic Metal Contamination of Road Dust in Delhi City, India
Atmosfera, [Vol. 29](#), Issue 3, 2016, pp. 221–234, 2016, (I.F: 0.750).
 6. Ramdayal K. Gupta*, Avinash V. Bharati, Suhas M. Tamhane, **Anil D. Bhanarkar** and Rajesh B. Biniwale
Effect of Dilution of Nitric Oxide with Air and Subsequent Absorption in Water Using Airlift Loop Reactor
International Journal of Science, Engineering and Technology, Vol. 3, pp 217-222, Jan-Feb 2015, (Open Access - IF: 3.25).
 7. **A.D. Bhanarkar***, R.K. Gupta, R. B. Biniwale and S.M. Tamhane
Nitric oxide Absorption with Hydrogen Peroxide in Airlift Reactor: a Study Using Response Surface Methodology
International Journal of Environmental Science and Technology, Vol 11 (6) pp 1537-1548, September 2014, (IF: 2.19).
 8. B. S. Rajaram, P.V. Suryawanshi, **A.D. Bhanarkar*** and C.V.C. Rao
Heavy Metals Contamination in Road Dust in Delhi City, India
Environmental Earth Science, Vol 72, Issue 10 , pp 3929–3938, November 2014, (IF: 1.765).
 9. Neeta Thacker, Javed Sheikh *, S. M. Tamhane, **Anil Bhanarkar**, Deepanjan Majumdar, Kanchan Singh, Chatrapati Chavhan and Jitendra Trivedi
Emissions of polychlorinated dibenzo-p-dioxins (PCDDs), dibenzofurans (PCDFs), and dioxin-like polychlorinated biphenyls (PCBs) to air from waste incinerators and high thermal processes in India
Environmental Monitoring and Assessment, Vol 185, Issue 1, pp 425–429, January 2013 , (IF:1.679).
 10. R.K. Gupta, Deepanjan Majumdar, J.V. Trivedi and **A.D. Bhanarkar***
Particulate matter and elemental emissions from a cement kiln
Fuel Processing Technology, Vol 104, Pages 343–351, December 2012, (IF:3.352).
 11. **A. D. Bhanarkar***, A. G. Gavane, D.S. Tajane, S.M. Tamhane and P. Nema
Composition and Size Distribution of Particules Emissions from a Coal-Fired

- Power Plant in India with Special Reference to Electrostatic Precipitator
Fuel, Volume 87, Issues 10-11, pp 2095-2101, August 2008, (IF: 3.52).
12. **A. D. Bhanarkar***, S. K. Goyal, R. Sivacoumar and C. V. Chalapati Rao
Assessment of Contribution of SO₂ and NO₂ from different Sources in
Jamshedpur Region, India
Atmospheric Environment, Vol. 39 (40), pp. 7745- 7760, Dec 2005, (IF:3.281).
13. **A. D. Bhanarkar***, A. Shrivastava, A. E. Joseph and Rakesh Kumar
Air Pollution and Heat Exposure Study in the workplace in a Glass Manufacturing
Unit in India
Environmental Monitoring and Assessment, Vol. 109 (1-3), pp. 73-80, October
2005, (IF:1.679).
14. **A. D. Bhanarkar***, P. S. Rao, D. G. Gajghate and P. Nema
Inventory of SO₂, PM and Toxic Metals Emissions from Industrial Sources in
Greater Mumbai, India
Atmospheric Environment, Vol. 39 (21), pp. 3851-3864, July 2005, (IF:3.281).
15. R. Sivacoumar*, **A. D. Bhanarkar**, S.K. Goyal, S.K. Gadkari and A.L. Aggarwal
Air Pollution Modeling for an Industrial Complex and Model Performance
Evaluation through Statistical Analysis
Environmental Pollution, U.K., Vol. 111(3), pp. 471-477, 2001, (IF: 4.143).
16. D.G. Gajghate*, **A.D. Bhanarkar** and P.P. Pipalatkhar
Atmospheric concentration and fluxes of trace metals in Visakhapatnam City of
India
Int. J. Environmental Engineering, Vol.5, No. 2, Pages 111-128, 2013.
17. N. Thacker*, Munusamy Anbu, S.M. Tamhne, A.D Bhanarkar, D.D. Majumdar, M.
Sharma and Sharandeep Singh
Release of PCDDs/Fs: UNEP-Toolkit versus measured values
Journal Organohalogen Compounds, Vol.74, pp 576-579, 2012.
18. **A. D. Bhanarkar**, Deepanjan Majumdar*, P. Nema and K. V. George
Emissions of SO₂, NO_x and Particulate Matter from a Pipe Manufacturing Plant
and Prediction of Impact on Ambient Air Quality
Environmental Monitoring and Assessment, Vol.169, 677–685, 2010, (IF: 1.679).
19. R. K. Gupta, **A. D. Bhanarkar***, S. M. Tamhane and S. M. Dhopte
Assessment of In-Plant Particulate Matter and its Toxic Metals Contents of
Sponge Iron Industry in Goa, India
Bulletin of Environmental Contamination and Toxicology, Vol.85, 614–618, 2010,
(IF: 1.255).

20. G. H. Pandya*, A. G. Gavane, **A. D. Bhanarkar** and V.K. Kondawar
Concentrations of Volatile organic compounds (VOCs) at an Oil Refinery
International Journal of Environmental Studies, Vol. 63 (3), pp. 337- 351, June 2006.
21. **A. D. Bhanarkar***, C. V. Chalapati Rao and V. I. Pandit
Air Pollution Modeling for Power Plant Site Selection
International Journal of Environmental Studies, Vol. 62 (5), pp. 527-534, October 2005.
22. D. G. Gajghate* and **A. D. Bhanarkar**
Characterisation of Particulate Matter for Toxic Metals in Ambient Air of Kochi City, India
Environmental Monitoring and Assessment, Vol. 102 (1-3), pp. 119 -129, March 2005, (IF: 1.679).
23. **A. D. Bhanarkar***, A. Shrivastava, A. E. Joseph and R. Kumar
Air Pollution and Heat Exposure Study in the workplace in a Glass Manufacturing Unit
Letters to The Editor, *International Journal of Environmental Studies*, Vol. 61 (3), pp. 251-252, June 2004.
24. **A. D. Bhanarkar** and D. G. Gajghate*
Tracking Toxic Metals in the Ambient Air of Agra City, India
Bulletin of Environmental Contamination and Toxicology, Vol. 72 (4), pp. 806-812, April 2004, (IF: 1.255).
25. **A. D. Bhanarkar***, D. G. Gajghate and M. Z. Hasan
Assessment of Impacts of Fossil Fuel based Power Plant
International Journal of Environmental Studies, Vol. 60 (4), pp. 225-233, August 2003.
26. **A. D. Bhanarkar***, D. G. Gajghate and M. Z. Hasan
Assessment of Air Pollution from Small Scale Industry
Environmental Monitoring and Assessment, Vol. 80 (2), pp. 125-133, December 2002, (IF:1.679)
27. **A. D. Bhanarkar***, D. G. Gajghate and M. Z. Hasan
Air Pollution Concentrations in Harayana Sub-region, India
Bulletin of Environmental Contamination and Toxicology, Vol. 69 (5), pp. 690-695, November 2002, (IF: 1.255)
28. **A. D. Bhanarkar***, V. I. Pandit, C. V. Chalapati Rao and M. Z. Hasan
Prediction of Air Quality Impacts of Power Plant Located at Coastal and Inland Area

Indian Journal of Environmental Protection, Varanasi, India, Vol. 22, No. 3, pp. 266-270, March 2002

29. **A. D. Bhanarkar***, D. G. Gajghate and M. Z. Hasan

Air Quality Management in Iron and Steel Industry

Environmental Pollution Control Journal, New Delhi, 4(5), pp. 24-36, Jul-Aug 2001

30. R. Sivacoumar*, **A. D. Bhanarkar**, S.K. Goyal and S.K. Gadkari

Air Quality Prediction and Model Performance Evaluation

Journal of Indian Association for Environmental Management, Nagpur, 26 (3), pp. 163-167, October 1999

Membership of Professional Bodies / Societies

Sr. No.	Name of Professional Society	Country	Membership Type	From Date
1.	Indian Institute of Chemical Engineers (IICHE), Kolkata.	India	Life Member	1999
2.	Indian Science Congress Association (ISCA), Kolkata.	India	Life Member	1995
3.	Society for Clean Environment (SOCLEEN), Mumbai.	India	Life Member	1995
4.	Indian Association Environmental Management (IAEM), Nagpur.	India	Life Member	1993