

CURRICULUM VITÆ

MD. AYNUL BARI, Dr.-Ing., P.Eng.

Assistant Professor

Department of Environmental & Sustainable Engineering

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RESEARCH INTEREST:

- Sustainable air pollution management
- Ambient air quality monitoring and characterization
- Indoor and outdoor behavior of air pollutants
- Particulate air pollution (fine, ultrafine and nanoparticles)
- Characterization of hazardous air pollutants (HAPs) or air toxics
- Atmospheric deposition and transport of air pollutants
- Air quality modeling (source apportionment) for controlling emissions
- Sustainable transportation and air quality
- Low-cost air quality sensors
- Environmental impact assessment
- Influence of energy development (oil sands, shale gas) on air quality and public health
- Household air pollution and impact on air quality and public health
- Biomass smoke (residential, wildfires, prescribed agricultural burning) pollution
- Air pollutants exposure, risk assessment and environmental public health

EDUCATION

- **Ph.D. Environmental Engineering (air quality)** **Oct. 2004 – Mar. 2009**
University of Stuttgart, Institute of Combustion and Power Plant Technology (IFK), Germany.
Supervisor: Prof. Dr.-Ing. Guenter Baumbach
Thesis title: Investigation of Particulate Matter originating from Wood Combustion in Residential areas
- **M.Sc. Environmental Engineering 'WASTE' (Air Quality Control, Solid Waste and Waste Water Process Engineering)** **Apr. 2002 – Mar. 2004**
University of Stuttgart, Institute of Combustion and Power Plant Technology (IFK), Germany. Major: Air Quality and Solid Waste
Supervisor: Prof. Dr.-Ing. Guenter Baumbach
Thesis title: Determination of the origin of air pollutants in Cyprus with multivariate statistical methods on the basis of particle composition
- **B.Sc. Civil Engineering** **Jan. 1995 – Jun. 2000**
Bangladesh University of Engineering and Technology (BUET), Bangladesh
Thesis title: Modeling of bus fleet schedules in a city

WORK EXPERIENCE

Research Associate

University of Alberta, School of Public Health

Jan. 2014 – Mar. 2018

- Identification of SO₂-related sources in the Athabasca Oil Sands Region.
- Evaluation of chloride levels in Oil Sands processes water (OSPW).

- Assessment of influences of Alberta Oil Sands development on air quality and atmospheric deposition.
- Evaluation of air quality indicators in Alberta.
- Source apportionment of VOCs and fine particles in urban and industrial areas of Alberta.

Consultancy

2013 – present

- Alberta Environment & Parks (AEP) for identification of SO₂-related sources in the Athabasca Oil Sands Region (2018).
- Canada's Oil Sands Innovation Alliance (COSIA) for evaluation of Cl⁻ levels in OSPW (2017/2018)
- TransAlta for fine particulate matter speciation study in Edmonton (2015/2016).
- EPCOR for evaluation of biohazards and corresponding requirements, regulations and best management practices of wastewater collection and treatment system worker exposure protection (2015).
- Capital Power Corporation for recommendations for approval of the new Genesee Air Monitoring Station site according to AESRD Air Monitoring Directive Siting requirements (2015).
- TransAlta and Capital Power Corporation for source identification of fine particles (PM_{2.5}) in west-central Alberta (2014).
- Public Health Agency of Canada for literature review on impacts of physical environment (2014)
- Health Canada for source apportionment of indoor and outdoor VOCs using positive matrix factorization (2013).

Post-Doctoral Fellow

University of Alberta, School of Public Health

Jan. 2011 – Dec. 2013

- Investigation of residential indoor air quality exposure study in Edmonton.
- Quantification of atmospheric deposition of organic and inorganic contaminants related to Alberta oil sands development.

NSERC Visiting Fellow

Environment Canada, Air Quality Research Division, Toronto, ON

Dec. 2009 – Nov. 2010

- Implemented source attribution scheme to discriminate between transportation and other source types for polycyclic aromatic hydrocarbons using regional air quality model AURAMS-PAH.
- Evaluated performance of regional air quality modeling for PAHs in North America (42 km resolution). Tools used: Linux, AURAMS-PAH, Arc View.

Wissenschaftlicher Mitarbeiter (Scientific Staff)

Jan. 2009 – Dec. 2009

University of Stuttgart, Department of Air Quality Control, IFK, Stuttgart, Germany

- Evaluated the importance of renewable energy source (clean biomass combustion) for air quality in residential areas.
- Measured ambient criteria pollutants (PM₁₀, PM_{2.5}, CO, NO_x) and performed lab analysis of ambient PM₁₀ samples and emission samples for PAH by Gas Chromatography Mass Spectrometry (GC/MS).

Scientific Research Assistant

Oct. 2004 – Dec. 2008

University of Stuttgart, IFK, Stuttgart, Germany

- Worked in the Federal Ministry of Education and Research (BMBF) project 'Identification of traffic-related PM sources at high traffic sites in Stuttgart'.

TEACHING EXPERIENCE

- **Instructor**

University of Alberta, Department of Earth and Atmospheric Sciences: Fall 2017

- Conduct lecture on Human Geography and Planning course 'HGP 443 Environment & Health (3.0 credit), 20 students

University of Alberta, School of Public Health: Jan. 2014 – Dec. 2017

- Guest lecturer in 'SPH 511 – Environmental Contaminant Exposure Assessment'
- Guest lecturer in 'SPH 512 – Environmental Risk Assessment and Management'.
- Supervise graduate students.

University of Stuttgart, Germany Oct. 2004 – Dec. 2009

- Conduct WASTE M.Sc. lecture and seminar course 'Planning of Measurements (3.5 credits)'.
- Conduct practical work "Measurement of Air Pollutants" (1.5 credits) (30–40 students).
- Supervise for 'Individual practical work' (3.5 credits) and 'Independent Study' (6 credits).
- Supervise for 'Master's thesis' (30 credits).

Topics: Investigation of ground level ozone transport in Cyprus, prediction of NO_x and PM₁₀ at traffic sites in Stuttgart, Germany.

- **Graduate Teaching Assistant** Oct. 2004 – Dec. 2008

University of Stuttgart, Germany

- Courses included: Air Quality Control, Measurement Methods and Application, Planning, Quality Control, Quality Assurance of Measurements
- Responsibilities included: preparing lecture slides and teaching materials, administering exams, marking exams, (class size: 40 – 60 students)

LIST OF PUBLICATIONS

I	Refereed Scientific Papers:	a. Published	28
		b. Submitted	1
		c. In preparation	5
II	Refereed Conference Proceedings:		34
III	Technical Reports and Book Chapters:		9

I REFEREED SCIENTIFIC PAPERS

Ia ARTICLES PUBLISHED IN PEER REFEREED JOURNALS

28. **Bari, M.A.**, Kindzierski, W.B. (2018). Ambient volatile organic compounds (VOCs) in Calgary, Alberta: sources and screening health risk assessment. *Science of the Total Environment* 631–632, 627–640.
27. **Bari, M.A.**, Kindzierski, W.B. (2018). Ambient volatile organic compounds (VOCs) in communities of the Athabasca oil sands region: Sources and screening health risk assessment. *Environmental Pollution* 235, 602–614.
26. **Bari, M.A.**, Kindzierski, W.B. (2018). Characteristics of air quality and fine particulate matter sources in the town of Hinton, Alberta. *Atmospheric Pollution Research* 9, 84–94.
25. **Bari, M.A.**, Kindzierski, W.B. (2018). Characterization of air quality and fine particulate matter (PM_{2.5}) sources in the city of Calgary, Canada. *Atmospheric Pollution Research* 9, 534–543.
24. **Bari, M.A.**, Kindzierski, W.B. (2017). Ambient fine particulate matter (PM_{2.5}) in Canadian oil sands communities: Levels, sources and potential risk for public health. *Science of the Total Environment* 595, 828–838.

23. **Bari, M.A.**, Kindzierski, W.B. (2017). Concentrations, sources and human health risk of inhalation exposure to air toxics in Edmonton, Canada. *Chemosphere* 173, 160–171.
22. **Bari, M.A.**, Kindzierski, W.B. (2017). Characteristics of air quality and sources affecting ambient fine particulate matter (PM_{2.5}) levels in the City of Red Deer, Canada. *Environmental Pollution* 221, 367–376.
21. **Bari, M.A.**, Kindzierski, W.B. (2016). Fine particulate matter (PM_{2.5}) in Edmonton, Canada: source apportionment and potential risk for human health. *Environmental Pollution* 218, 219–229.
20. **Bari, M.A.**, Kindzierski, W.B. (2016). Evaluation of air quality indicators in Alberta, Canada: An international perspective. *Environment International* 92-93, 119–129.
19. **Bari, M.A.**, Kindzierski, W.B., Spink, D. (2016). Twelve-year trends in ambient volatile organic compounds in a community of the Alberta Oil Sands Region, Canada. *Environment International* 91, 40–50.
18. **Bari, M.A.**, Kindzierski, W.B. (2016). Eight-year (2007–2014) trends in ambient fine particulate matter (PM_{2.5}) and its chemical components in the Capital Region of Alberta. *Environment International* 91, 122–132.
17. **Bari, M.A.**, Kindzierski, W.B. (2015). Fifteen-year trends in criteria air pollutants in oil sands communities of Alberta, Canada. *Environment International* 74, 200–208.
16. **Bari, M.A.**, Kindzierski, W.B., Wallace, L., MacNeill, M., Hérox, M.E., Wheeler, A.J. (2015). Indoor and outdoor levels and sources of sub-micron particulate matter (PM₁) at homes in Edmonton, Canada. *Environmental Science & Technology* 49, 6419–6429.
15. **Bari, M.A.**, Kindzierski, W.B., Wallace, L., MacNeill, M., Hérox, M.E., Wheeler, A.J. (2015). Source apportionment of indoor and outdoor volatile organic compounds at homes in Edmonton, Canada. *Building and Environment* 90, 114–124.
14. **Bari, M.A.**, Curran, R.L.T., Kindzierski, W.B. (2015). Field performance evaluation of Maxxam passive samplers for regional monitoring of ambient SO₂, NO₂ and O₃ concentrations in Alberta, Canada. *Atmospheric Environment* 114, 39–47.
13. **Bari, M.A.**, Kindzierski, W.B., Cho, S. (2014). A wintertime investigation of atmospheric deposition of metals and PAHs in the Athabasca Oil Sands Region, Canada. *Science of the Total Environment* 485–486, 180–192.
12. **Bari, M.A.**, MacNeill, M., Kindzierski, W.B., Wallace, L., Hérox, M.E., Wheeler, A.J. (2014). Predictors of coarse particulate matter and associated endotoxin concentrations in residential environments. *Atmospheric Environment* 92, 221–230.
11. Galarneau, E., Makar, P.A., Zheng, Q., Narayan, J., Zhang, J., Moran, M.D., **Bari, M.A.**, Pathela, S., Chen, A., Chlumsky, R. (2014). PAH concentrations simulated with AURAMS-PAH over Canada and the USA. *Atmospheric Chemistry and Physics* 14, 4065–4077.
10. Kindzierski, W.B., **Bari, M.A.**, Hashisho, J., Shariaty, P., Reid, B. (2013). Automotive wastes. *Water Environment Research* 85, 1452–1473.
9. Kindzierski, W.B., Small, C.C., Fang, Y., **Bari, M.A.**, Hashisho, J. (2012). Automotive wastes. *Water Environment Research* 84, 1407–1431.
8. **Bari, M.A.**, Baumbach, G., Brodbeck, J., Struschka, M., Kuch, B., Scheffknecht, G. (2011). Characterisation of particulates and carcinogenic polycyclic aromatic hydrocarbons in wintertime wood-fired heating in residential areas. *Atmospheric Environment* 45, 7627–7634.
7. **Bari, M.A.**, Baumbach, G., Kuch, B., Scheffknecht, G. (2011). Air pollution in residential areas from wood-fired heating. *Aerosol and Air Quality Research* 11 (6): 749–757.
6. **Bari, M.A.**, Kindzierski, W.B., Lashaki, M.J., Hashisho, J. (2011). Automotive wastes. *Water Environment Research* 83 (10), 1467–1487.

5. **Bari, M.A.**, Baumbach, G., Kuch, B., Scheffknecht, G. (2010). Temporal variation and impact of wood smoke pollution on a residential area in southern Germany. *Atmospheric Environment* 44: 3823–3832.
4. **Bari, M.A.**, Baumbach, G., Scheffknecht, G., Kuch, B. (2010). Particle-phase concentrations of polycyclic aromatic hydrocarbons in ambient air of rural residential areas in southern Germany. *Air Quality, Atmosphere and Health* 3: 103–116.
3. **Bari, M.A.**, Baumbach, G., Kuch, B., Scheffknecht, G. (2009). Wood smoke as a source of particle-phase organic compounds in residential areas. *Atmospheric Environment* 43: 4722–4732.
2. **Bari, M.A.**, Baumbach, G., Sarachaga-Ruiz, L., and Kleanthous, S. (2009). Identification of PM10 sources in a Mediterranean Island. *Water, Air & Soil Pollution: Focus* 9: 39–53.
1. Kleanthous, S., **Bari, M.A.**, Baumbach, G., Sarachaga-Ruiz, L. (2009). Influence of particulate matter on the air quality situation in a Mediterranean island. *Atmospheric Environment* 43: 4745–4753.

lb. SUBMITTED

1. Khan, M.F., Hamid, A.H., **Bari, M.A.**, Tajudin, A.B.A., Latif, M.T., M.I.A., Nadzir, Sahani, M., Wahab, M.S.M., Yusup, Y., Maulud, K.N., M.S.M., Yusuf, Y., Amin, N., Akhtaruzzaman, M., Kindzierski, W., Kumar, P., (2017). Airborne particles in the city center of Kuala Lumpur: origin, potential driving factors, and deposition flux in human respiratory airways. *Science of the Total Environment*.

lc. IN PREPARATION

1. **Bari, M.A.**, Kindzierski, W.B., Roy, P. (2018). Identification of ambient PM₁₀, VOCs and SO₂ sources in industrial areas in the Lower Athabasca Oil Sands Region of Alberta, Canada. *Chemosphere*.
2. **Bari, M.A.**, Kindzierski, W.B., Roy, P. (2018). Characterization of SO₂ levels and associated local sources in the Athabasca Oil Sands Region of Alberta, Canada. *Atmospheric Environment*.
3. **Bari, M.A.**, Nawyaz, A.R.M.S., Kindzierski, W.B. (2018). Characterization of ambient fine particulate matter (PM_{2.5}) chemical components in the City of Calgary, Canada. *Chemosphere*.
4. Bari, M.A., Nawyaz, A.R.M.S., Kindzierski, W.B. (2018). Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in the air – a review. *Environmental Science and Technology*.
5. **Bari, M.A.**, Kindzierski, W., Walgraeve, C., Duc, D.H., Van Langenhove, H., 2018. Sources and potential health risk of indoor and ambient volatile organic compounds (VOCs) in Dhaka, Bangladesh. *Science of the Total Environment*.

CITATION STATISTICS

Google scholar Number of citation: 616, h-index: 14 i-10 index: 17

http://scholar.google.ca/citations?hl=en&user=DweuBE0AAAAJ&view_op=list_works

ResearchGate RG score: 27.81 https://www.researchgate.net/profile/Md_Aynul_Bari?ev=prf_high

REFEREED CONFERENCE PROCEEDINGS (*presenter)

34. **Bari, M.A.***, Kindzierski, W.B. (2017). Evaluation of air quality indicators in Alberta – An international perspective. Abstract Proceedings at Air & Waste Management Association Canadian Prairie & Northern Section (CPANS) Annual Conference, May 9, Edmonton, Alberta (oral).

33. Kindzierski, W.B.*, **Bari, M.A.**, Wang, X., Wetmore, T., Maal-Bared, R. Michaels, C. (2015). Evidence of Wastewater Treatment Plant Worker Biohazard Exposure and Health Symptom Responses. Canadian Society for Bioengineering (CSBE) Conference, July 5-8, Edmonton, Alberta (*oral*).
32. **Bari, M.A.***, Kindzierski, W.B. (2015). Monitoring of Indoor and Outdoor Levels of BTEX and Petroleum Tracer Compounds in Edmonton Homes. Abstract Proceedings at Air & Waste Management Association Canadian Prairie & Northern Section (CPANS) Annual Conference, May 26-27, Edmonton, Alberta (*oral*).
31. Kindzierski, W.B.*, **Bari, M.A.** (2015). 16-year air concentration trends in the Wood Buffalo Region. Abstract Proceedings at Oil Sands Monitoring Symposium, February 24-25, Edmonton, Alberta (*oral*).
30. **Bari, M.A.***, Kindzierski, W.B. (2014). Atmospheric deposition of metals and polycyclic aromatic hydrocarbons (PAH) in the Athabasca Oil Sands Region, Alberta. Abstract at INSIGHTS Focus on Public Health, School of Public Health, University of Alberta, November 12 (*oral*).
29. Kindzierski, W.B.*, **Bari, M.A.** (2014). Present state of the environmental footprint of oil sands combustion pollutant emissions in Fort Chipewyan, Alberta. Abstract Proceedings at North American Oil and Gas Conference, Calgary, Alberta, 22-23 October (*oral*).
28. Kindzierski, W.B.*, **Bari, M.A.** (2014). 2012 Air Quality in Alberta Oil Sands community of Fort McKay versus Canadian urban locations. Abstract Proceedings at International Conference on Environmental Science and Technology, Houston, Texas, 9-13 June (*oral*).
27. **Bari, M.A.***, Kindzierski, W.B. (2012). A wintertime investigation of atmospheric pollutants deposition in the Alberta oil sands region, Canada. Abstract Proceedings at 2012 Fall Meeting, American Geophysical Union, San Francisco, California, 3-7 December (*poster*).
26. **Bari, M.A.***, Kindzierski, W.B., Wallace, L., MacNeill, M., Hérox, M.E., Wheeler, A.J. (2012) Characteristics of indoor and outdoor sub-micron particulate matter (PM₁) in residences of Edmonton, Canada. Abstract in the Proceedings of the 22nd Annual meeting of the International Society of Exposure Science, October 28 – Nov 1, Seattle, Washington (*Oral*).
25. Baumbach, G.*, Ang, K.B., **Bari, M.A.**, Dreher, W., Vogt, U. (2012). Effects of meteorological conditions, building density and edge vegetation on the PM concentrations at a high polluted traffic road. Proceedings in the 4th International Symposium and IUAPPA Regional Conference on 'Air Quality Management at Urban, Regional and Global Scales', Istanbul, Turkey, September 10–13 (*oral*).
24. **Bari, M.A.***, Kindzierski, W.B., Van Ryswyk, K., Hérox, M.E., Wallace, L., MacNeill, M., Wheeler, A.J. (2012). Characteristics of indoor and outdoor coarse particles in residences of Edmonton, Canada. Proceedings in the 12th International Environmental Specialty Conference, Edmonton, Canada, June 6–9 (*oral*).
23. Kindzierski, W.B.*, **Bari, M.A.** (2012). Air quality in Alberta oil sands community of Fort McKay compared to urban residential locations in Canada in 2009. Proceedings in the 12th International Environmental Specialty Conference, Edmonton, Canada, June 6–9 (*oral*).
22. Kindzierski, W.B.*, **Bari, M.A.** (2011). Long-term trends and influence of criteria pollutants on regional air quality in Fort McKay, Alberta. Proceedings in the Environmental Management and Engineering 731/733: Unconventional Oil-2011. doi: 10.2316/P.2011.731-015 (*oral*).
21. Galarneau, E.*, Makar, P.A., **Bari, M.A.** (2010). Regional air quality modelling of PAHs in North America. Abstract in the Proceedings of the International Aerosol Conference, August 29–September 3, Helsinki, Finland (*oral*).
20. **Bari, M.A.**, Brodbeck, J., Struschka, M., Baumbach, G.*, Kuch, B., Scheffknecht, G. (2010). Domestic wood combustion as a source of organic particulate matter in residential areas. Abstract

in the Proceedings of the International Aerosol Conference, August 29–September 3, Helsinki, Finland (*oral*).

19. **Bari, M.A.***, Baumbach, G., Brodbeck, J., Struschka, M., Kuch, B., Scheffknecht, G. (2010). Characterisation of carcinogenic PAH exposure in wintertime wood-fired heating in residential areas. Abstract in the Proceedings of the Specialty Conference “Air Pollution and Health”, March 22–26, San Diego, USA (*poster*).
18. **Bari, M.A.***, Brodbeck, J., Struschka, M., Baumbach, G., Kuch, B., Scheffknecht, G. (2010). Importance of clean biomass combustion for the air quality in residential areas. Proceedings in the IEEE xplore, 1st International Conference on ‘Developments in Renewable Energy Technology (ICDRET), December 17–19, 2009, Dhaka, Bangladesh, p 1–4 (*poster*).
17. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., Kuch, B. (2009). Characterisation of particle-phase wood smoke tracer compounds in ambient air of a residential area. Abstract in the Proceedings of the European Aerosol Conference, Karlsruhe, September 6–11 (*oral*).
16. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., Kuch, B. (2009). Air pollution in residential areas from wood-fired heating. Proceeding of the 2nd International CEMEPE & SECOTOX Conference. Mykonos island, Greece, June 21–26, pp 1219–1224 (*oral*).
15. Baumbach, G.*, Juschka, W., Struschka, M., Carrasco, M., Ang, K.B., **Bari, M.A.**, Hu, L., Scheffknecht, G., Baechlin, W., Soergel, C., Trukenmueller, A. (2009). Modelling and validation measurements of ambient air pollution in residential areas considering the expansion of solid biofuel use in small-scale firings for house heating. 7th International Conference on “Air Quality – Science and Application”, Istanbul, Turkey, March 24–27, pp 1–4 (*oral*).
14. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., Kuch, B. (2008). Contribution of Wood Combustion to Organic Particulate Matter in Residential Areas. Better Air Quality (BAQ) Workshop, Bangkok, Thailand, 8 pages, November 12–14 (*poster*).
13. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., and Kuch, B. (2008). A method for Identification of Wood Combustion Particles in Residential Areas. Proceedings in the colloquium “Neue Entwicklung bei der Messung und Beurteilung der Luftqualität“, of the Commission on Air Pollution Prevention of VDI (Association of German Engineers) and DIN (German Institute for Standardization), Nürnberg, Germany, June 24 – 25 (*poster*).
12. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., and Kuch, B. (2007). Determination of Particle-phase Organic Compounds as Wood Burning Tracers in a Residential Site of Germany. AAAR (American Association of Aerosol Research) 26th Annual Conference, Reno, Nevada, USA, September 24 – 28 (*oral*).
11. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., and Kuch, B. (2007). Characterisation of Polycyclic Aromatic Hydrocarbons from different Sources of Urban Areas in Germany. European Aerosol Conference, Salzburg, Austria, September 9 – 14 (*oral*).
10. Baumbach, G.*, Pfeiffer, H., Sarachaga-Ruiz, L., **Bari, M.A.**, Kleanthous, S., Poulida, O., and Beyaz, E. (2007). Air Quality as an Integrating Factor for the Greek and Turkish Cypriot Communities. Proceedings in the 14th International Union of Air Pollution Prevention and Environmental Protection Association (IUAPPA) World Congress, Brisbane, Australia, September 9 – 13, pages 6 (*oral*).
9. **Bari, M.A.***, Baumbach, G., Sarachaga-Ruiz, L., and Kleanthous, S. (2007). Characterization of Ambient Particulate Matter on a Mediterranean Island. Proceedings in the First International Conference on Environmental Management, Engineering, Planning and Economics, p 2489-2494, Skiathos, Greece, June 24 – 28 (*oral*).

8. **Bari, M.A.***, Baumbach, G., Scheffknecht, G., and Kuch, B. (2007). Sources of Particle-Phase Polycyclic Aromatic Hydrocarbons in a Residential Site in Southern Germany. Proceedings in the 6th International Conference on Urban Air Quality, p 7–10, Limassol, Cyprus, March 27–29 (*poster*).
7. Ang, K.B.* , Baumbach, G., **Bari, M.A.**, Vogt, U., Scheffknecht, G., Dreher, W., Warres, C., and Pesch, P. (2007). Identification of Traffic-Related PM Sources at a High Traffic Site in Stuttgart, Germany. Proceedings in the 6th International Conference on Urban Air Quality, p 31-34, Limassol, Cyprus, March 27 – 29 (*poster*).
6. Kleanthous, S.* , **Bari, M.A.**, Baumbach, G., and Sarachaga-Ruiz, L. (2007) The Particulate Matter Problem in Cyprus. Proceedings in the 6th International Conference on Urban Air Quality, p 3-6, Limassol, Cyprus, March 27 – 29 (*oral*).
5. Ang, K.B.* , Baumbach, G., **Bari, M.A.**, Scheffknecht, G., Dreher, W., and Pesch, P. (2007). Characterisation and Size Distribution of Airborne Particles in Urban Traffic and Background Sites at Stuttgart Neckartor. Abstract in the Proceedings of the European Aerosol Conference, Salzburg, Austria, September 9–14 (*poster*).
4. **Bari, M.A.**, Baumbach, G.* , Sarachaga-Ruiz, L., Drautz, S., Kleanthous, S. (2006). Particulate Matter Situation in Cyprus. 8th Highway and Urban Environment Symposium, Nicosia, Cyprus, June 12–14 (*poster*).
3. **Bari, M.A.***, Baumbach, G., Sarachaga-Ruiz, L., Drautz, S., Kleanthous, S., and Beyaz, E. (2005) PM₁₀ Source Apportionment Study in a Dry Mediterranean Island. Proceedings in the 5th International Conference on Urban Air Quality, p 81-84, March 29-31, Valencia, Spain (*poster*).
2. **Bari, M.A.***, Baumbach, G., Sarachaga-Ruiz, L., Drautz, S., Kleanthous, S. (2005). Determination of Fine Particulate Matter from Urban and Rural Sites. IASTA (Indian Aerosol Science and Technology Association) Bulletin 17 (Proceedings of 4th Asian Aerosol Conference), 101 – 102 (*poster*).
1. **Bari, M.A.***, Baumbach, G., Sarachaga-Ruiz, L., Drautz, S., and Kleanthous, S. (2005). Characterization and Comparison of Urban and Rural Particulate Matter on a Mediterranean Island. Abstract in the Proceedings of the AAAR International Speciality Conference on Particulate Matter Supersites Program and Related Studies, Atlanta, USA, February 7 – 11 (*oral*).

III TECHNICAL REPORTS AND BOOK CHAPTERS

9. Kindzierski, W., **Bari, M.A.** (2015). Investigation of fine particulate matter characteristics and sources in Edmonton, Alberta. Final Report, University of Alberta.
8. Kindzierski, W., **Bari, M.A.**, Wang, X. (2015). Literature evaluation and data scan of biohazards and corresponding requirements, regulations and/or best management practices for wastewater collection and treatment system worker exposure protection. Report for EPCOR, University of Alberta.
7. Kindzierski, W., **Bari, M.A.** (2014) TransAlta Generation Partnership and Capital Power Corporation Particulate Matter Speciation Study. Final Report for Alberta Environment and Sustainable Resource Development, Edmonton, Alberta, p 48.
6. Kindzierski, W., **Bari, M.A.** (2014) Literature Review on Impacts of the Physical Environment – Implications and Responses for Canada to Inform the Chief Public Health Officer’s (CPHO) Report on the State of Public Health in Canada.
5. **Bari, M.A.**, Kindzierski, W. (2012) Quantification of oil sands air contaminants deposition. Environment Policy Division, Alberta Environment and Sustainable Resource Development, Edmonton, p 56.

4. Baumbach, G., **Bari, M.A.**, Pfeiffer, H., Sarachaga-Ruiz, L., Kleanthous, S., Poulida, O., and Beyaz, E.(2007) Assessment of Air Quality in Cyprus. Newsletter WHO Collaborating Centre for Air Quality Management and Air Pollution Control; Issue 39, p 2-9.
3. Baumbach, G., Pfeiffer, H. 2004. Preliminary Assessment of Ambient Air Quality in Cyprus. UNOPS project, Final Report, chapter 5 (Bari, M.A.): Particulate matter situation in Cyprus. Institute of Process Engineering and Power Plant Technology, Universitaet Stuttgart.
2. Baumbach, G., Ang, K.B., **Bari, M.A.**, Vogt, U., Zeng, Y., 2006. Untersuchung der Ursachen hoher Feinstaubbelastung an verkehrsreichen Straßen und der Eigenschaften und Herkunft der gesammelten PM10-Stäube des Messortes Stuttgart-Neckartor. ISBN 3-928123-57-2.
1. In Baumbach, G. (2006). Air Quality Control, Springer, Heidelberg, chaptger 2.3 (Bari, M.A.): Particulate air pollution from domestic wood-fired heating (in preparation).

AWARDS

- 2011 Pre-approved candidate for Industrial R&D Fellowships of Natural Sciences and Engineering Research Council (NSERC), Canada.
- 2010 NSERC Visiting Post-doctoral Fellowship to work in Environment Canada (\$46,536).
- 2009 Alfred-Teufel Stiftung, Nagold, Research Fellowship, Germany (\$35,000).
- 2006-08 PhD scholarship from the Ministry of Science, Research and the Arts, Baden-Wuerttemberg State, Germany (\$40,000).
- 2002-08 Graduate Teaching and Research Assistantship, University of Stuttgart, Germany (\$60,000).
- 2007 Young Scientist Travel Award by the European Meteorological Society for an outstanding contribution to the 6th International Conference on Urban Air Quality, Cyprus (\$400).
- 2007 Travel Award by the Association of Aerosol Research (GAeF) to attend European Aerosol Conference in Salzburg, Austria, Germany (\$400).
- 2006 Best Poster Award by Chalmers University of Technology in 8th Highway and Urban Environment Symposium, Nicosia, Cyprus.
- 2005 Travel Award by AAAR International Specialty Conference on Particulate Matter Supersites Program and Related Studies, Atlanta, USA (\$500).

RESEARCH FUNDING

- 2018 Identification of ambient SO₂ sources in the Lower Athabasca Oil Sands Region.
Funding: Alberta Environment and Parks (\$40,000), Co-PI: **A. Bari**, PI- W. Kindzierski
- 2017–2018 Evaluation of chloride levels in oil sands processed water return.
Funding: Canada's Oil Sands Innovation Alliance (COSIA) (\$45,000), Co-PI: **A. Bari**, PI- Warren Kindzierski
- 2016–2017 Characteristics and sources of air pollutants in Hinton, Alberta.
Funding: West Central Airshed Society (\$30,000), Co-PI: **A. Bari**, PI- Warren Kindzierski
- 2015 Fine particulate matter speciation study in the Capital Region of Alberta.
Funding: Industry (\$54,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2015 Evaluation of biohazards and corresponding requirements and best management practices of wastewater collection and treatment system worker exposure protection.
Funding: EPCOR (\$10,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2015 Recommendations for approval of the new Genesee Air Monitoring Station site according to AESRD Air Monitoring Directive Siting requirements.

- Funding: Capital Power Corporation (\$5,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2014 Literature Review on impacts of the Physical Environment.
- Funding: Public Health Agency of Canada (\$10,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2014 Source identification of fine particles (PM_{2.5}) in west-central Alberta.
- Funding: TransAlta and Capital Power (\$25,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2013 Source apportionment of indoor and outdoor VOCs using positive matrix factorization.
- Funding: Health Canada (\$5000), PI: **A. Bari**
- 2013-2015 Environmental Public Health Surveillance System
- Funding: Alberta Health & Wellness, Role: Postdoc, PI: Warren Kindzierski
- Sept. 2011-Mar. 2012 Quantification of oil sands air contaminants deposition.
- Funding: Alberta Environment and Sustainable Resource Development (\$62,000), Co-PI: **A. Bari**, PI: Warren Kindzierski
- 2010–2012 Residential indoor air quality exposure study in Edmonton.
- Funding: Health Canada (\$550,000), Role: Postdoc, PI: **Warren Kindzierski**

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Affiliation

- *The Association of Professional Engineers and Geoscientists of Alberta (APEGA)*

Reviewer for scientific journals

Atmospheric Environment, Environmental Science & Technology, Environmental Pollution, Science of the Total Environment, Chemosphere, Energy and Fuel, Indoor and Built Environment, Environmental Research, Atmospheric Pollution Research, Urban Climate, IEEE Access, Earth Systems and Environment.