

WEI HUANG (黄薇)**Curriculum Vitae**

Professor
Dept of Occ & Environ Health Science
Peking University School of Public Health
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Deputy Director
Peking University Institute of Environ Medicine
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RESEARCH AREAS

Environmental epidemiology, health effects, intervention, and risk Assessment

EDUCATION

Harvard T.H. Chan School of Public Health, Boston, US
Sc.D., Department of Environmental Health, 2003
Dissertation — “Biological Monitoring of Occupational Exposure to Diesel Exhaust”
Advisor: Professor Thomas J. Smith, PhD, CIH

Northeastern University, Boston, US
M.S., Environmental Sciences, 1997

Hunan University, China
B.S., Water Engineering, 1991

PROFESSIONAL EXPERIENCE**Peking University(2008-present)**

Professor, Department of Occupational and Environmental Health, School of Public Health, Peking University Health Science Center (2013-present)

Associate Professor, Center for Environment and Health, Academy of Advanced Interdisciplinary Studies (2008-2013)

Health Effects Institute (2003-2007)

Staff Scientist

Harvard T.H. Chan School of Public Health (1995-2004)

Research Assistant/Post-doctoral Instructor, Department of Environmental Health

World Resource Institute (Summer 1997)

Intern, Summer 1997

ADJUNCT AFFILIATIONS**Key Laboratory of Molecular Cardiovascular Sciences of Ministry of Education (2013-present)**

Principal Investigator

Desert Research Institute (2014-2016)

Adjunct Professor (non-paid)

TEACHING

Peking University

Graduate Courses

“Progress in Environmental Epidemiology”, 1 Credit (2014 -, Course Lead)

“Advanced Occupational and Environmental Health”, 3 Credits (2013 -, Joint)

Undergraduate Courses

“Medical and Environmental Ethics”, 1 Credit (2016 -, Joint)

“Environmental Medicine”, 1 Credit (2013-, Joint)

“Environmental Health”, 2 Credits (2013-, Joint)

PROFESSIONAL SERVICES

Associate Editor of *Science of the Total Environment* (2017-)

Editorial Board Member of *Environmental Epidemiology* (2017-)

Working Group Member for World Health Organization on Global Air Quality Guidelines (AQGs) Update (2016-)

Consultant for World Health Organization on Global Reviews of Efficacy of Indoor Air Filtration (2018-)

Consultant for World Health Organization on Global Reviews of Efficacy of Personal Level Air Pollution Intervention (2017-)

Working Group Member for World Health Organization/International Agency for Research on Cancer on Carcinogenesis Assessment of Ambient Air Pollution, Monograph #109 (2012-2014)

Member, International Society of Environmental Epidemiology (1998-present)

Working Group Member for China National Committee on Air Quality Criteria Enactment (2019-present)

Chair for Youth Committee of Chinese Society of Environmental Mutagens (2019)

Working Group Member for China National Health Commission of China on Indoor Air Quality Standard Revision (2018-)

Executive Board Member and Deputy Secretariat General of Chinese Society of Environmental Mutagens (2013-)

COMMUNITY SERVICES

Representative, District People's Congress, Haidian District, Beijing (2016-)

Deputy Director, Women Affairs of Beijing Jiusan Society (2018-)

RESEARCH SUPPORT

Principal Investigator

PI: "Mechanism of Air Pollution Associated HDL Dysfunction", China National Science Foundation (81773381), RMB ¥720,000 (2018-2021)

China-PI: "ASPIRE: Air Pollution: Strategies for Personalized Intervention to Reduce Exposure", US National Health Institute (#2R01ES019616-06), US\$1,324,045 (2017-2022, US PIs: Sanjay Rajagopalan and Robert Brook).

PI: "Long-term air pollution exposure assessment for cohort studies", China Ministry of Science and Technology (2017YFC0211701), RMB ¥6,700,000 (2017-2020)

PI: "Evaluation on national air quality standards and criteria pollution research plan in China", China Ministry of Ecology and Environment (2110105), RMB ¥1,100,000 (2016-2019).

PI: "Ambient Air Pollution and Blood Pressure in Beijing Residents", Beijing Natural Science Foundation-Beijing Academy of Science and Technology (L150001), RMB ¥300,000 (2015-2017).

PI: "Health Benefits of Indoor Air Filtration for COPD Patients in Beijing", Philips Consumer Lifestyle B.V., Euro € 100,000 (2014-2015).

Co-PI: "Ambient Air Pollution and HDL Dysfunction", University of Michigan Health System-Peking Univ Health Science Center Joint Institute, US\$ 400,000 (2014-2016).

Co-PI: "Air Pollution and COPD Progression", Peking University - Tsinghua University Life Science Center (2013-03), RMB ¥2,500,000 (2014-2016).

PI: "Systematic Review of Air Pollution Criteria Research in China and Pilot Study", China Ministry of Ecology and Environment (201009032), RMB ¥6,700,000 (2010-2012).

PI: "Controlled Human Exposure to Source-Specific Particulates", China Ministry of Science and Technology 863 Project (2008AA062503), RMB ¥1,020,000 (2008-2011).

PI: "Time-series Analyses of Air Pollution and Mortality in Northwestern and Southern China", China Ministry of Ecology and Environment (200809109), RMB ¥1,610,000 (2008-2010).

PI: "Air Pollution, Climate, and Health", Science and Technology Division of British Embassy in China, GBP £20,000 (2008-2009).

Participating Researcher

Key Investigator: "Secondary Aerosol Formation Process and Its Health Effects", China National Science Foundation (21190051), RMB ¥4,000,000 (2012-2016).

Key Investigator: "Response to Drastic Changes in Air Pollution: Reversibility and Susceptibility", US Health Effects Institute (4760-RPFA05-3) and NIEHS (1R01ES015864), US\$ ~630,000 (2007-2011).

Key Investigator: "Environmental Process and Health Impact during 2008 Beijing Olympics", China National Science Foundation Key Project (20637020), RMB ¥1,800,000 (2007-2010).

Research Focus I: Health Effects of Air Pollution and Intervention

1. Rajagopalan S (Chair), Brauer M, Bhatnagar A, Bhatt DL, Brook JR, **Huang W**, Munzel T, Newby D, Siegel J, Brook RB (Vice Chair) (authors listed in alphabetic order). *Circulation*. 2020;142:e411–e431. DOI: 10.1161/CIR.0000000000000931
2. **Huang W***, Morawska. Face masks could raise pollution risks. *Nature (Comment)*. 2019. 574: 29-30.
3. Xu HB#, Brook RD, Wang T, Feng BH, Yi TC, Liu LS, Wu RS, Chen J, Zhang Y, Liu S, Zhao Q, Song XM, Zheng LM, Huo Y, Rajagopalan S, Li JP, **Huang W***. Short-term effects of ambient air pollution and outdoor temperature on biomarkers of myocardial damage, inflammation and oxidative stress in healthy adults. *Environmental Epidemiology*. 2019. 3: e078 (doi:10.1097/EE9.000000000000078).
4. Feng BH#, Qi RZ, Zhao JN, Wang T, Qi ZR, Xu HB, Zhao Q, Wu RS, Song XM, Guo JJ, Zheng LM, Ran Li, **Huang W***. Exercise training prevented endothelium dysfunction from particulate matter instillation in Wistar rats. *Science of the Total Environment*. 2019. 694: 133674
5. Li JP†, Zhou CP†, Xu HB†#, Brook RD, Liu SC, Yi TC, Wang Y, Zhao Q, Chen J, Song XM, Feng BH, Liu S, Zhang Y, Wu RS, Pennathur S, Rajagopalan S, Huo Y, Zheng LM, **Huang W***. Air pollution associated with high-density lipoprotein dysfunction among healthy adults, the Beijing AIRCHD study. *Arterioscler Thromb Vasc Biol*. March 2019. 513-521. DOI: 10.1161/ATVBAHA.118.311749.
6. Xu HB#, Wang T#, Liu SC, Brook RD, Feng BH, Zhao Q, Song XM, Yi TC, Chen J, Zhang Y, Wang Y, Zheng LM, Rajagopalan S, Li JP, **Huang W***. Air pollution associated with changes in biomarkers of atherosclerotic plaque instability and thrombosis in healthy adults: the Beijing AIRCHD study. *Circulation Research*. March 1, 2019. e30-43. DOI: 10.1161/CIRCRESAHA.118.313948.
7. Xu HB#, Chen J#, Zhao Q, Zhang Y, Wang T, Feng BH, Wang Y, Liu SC, Yi TC, Liu S, Wu RS, Zhang QC, Fang JK, Song XM, Rajagopalan S, Li JP, Brook RD, **Huang W***. Ambient air pollution is associated with cardiac repolarization abnormalities in healthy adults. *Environmental Research*. 2019. 171: 239-246.
8. Feng BH#, Song XM, Shu MS, Yu J, Zhang QQ, Zhao Q, Chen J, Zhang Y, Xu HB, Wang T, Liu S, Wu RS, Yu JZ, Dan M, Yu J, **Huang W***. High level of source-specific particulate matter air pollution associated with cardiac arrhythmias. *Science of the Total Environment*. 2019. 657: 1285-1293.
9. Liu S#, Chen J#, Zhao Q, Shao DQ, Song XM, Meliefste K, Du YP, Wang J, Wang M, Wang T, Feng BH, Wu RS, Xu HB, Bert Brunekreef, Bei He, **Wei Huang***. Cardiovascular benefits of short-term indoor air filtration intervention in elderly living in Beijing: an extended analysis of BIAPSY study. *Environmental Research*. 2018. 167: 632-638.
10. **Huang W**, Wang L, Li J, Liu M, Xu H, Liu S, Chen J, Zhang Y, Morishita M, Bard RL, Harkema JR, Rajagopalan S, Brook RD. Short-term blood pressure responses to ambient fine particulate matter exposures at the extremes of global air pollution concentrations. *American Journal of Hypertension* 2018; 31: 590-599.
11. Mathew AV, Yu J, Guo Y, Byun J, Chen YE, Wang L, Liu M, Bard RL, Morishita M, **Huang W**, Li J, Harkema JR, Rajagopalan S, Pennathur S, Brook RD. Effect of ambient fine particulate matter air pollution and colder outdoor temperatures on high-density lipoprotein function. *American Journal of Cardiology*. 2018. 122(4): 565-570.
12. Liu S#, Brook RD, **Huang W***, Fan ZJ, Xu HB, Wu RS, Sun ZC, Zhao XY, Ruan YP, Yan JH, Lian H, Gu DF, Rajagopalan S. Extreme levels of ambient air pollution adversely impact cardiac and central aortic hemodynamics: the AIRCMD-China study. *Journal American Society of Hypertension*. 2017. 11(11):754-761.

13. Ejike C; Wang L, Liu M, Morishita M, Bard RL, **Huang W**, Harkema J, Rajagopalan S, Brook RD. Personal-level exposure to environmental temperature is a superior predictor of endothelial-dependent vasodilatation than outdoor-ambient level. *Journal American Society of Hypertension*. 2017. 11(11): 746-753.
14. Zhang SY, Shao D#, Liu HY, Feng J, Feng BH, Song XM, Zhao Q, Chu M, Jiang CT, **Huang W***, Wang X*. Metabolomics analysis reveals that benzo[a]pyrene, a component of PM_{2.5}, promotes pulmonary injury by modifying lipid metabolism in a phospholipase A2-dependent manner in vivo and in vitro. *Redox Biology*. 2017. 13:459-469.
15. Shao D#, Du YP, Liu S, Brunkereef B, Meliefste K, Zhao Q, Chen J, Song XM, Wang M, Wang J, Xu H, Wu RS, Wang T, Lung CS, Wang X, He B, **Huang W***. Cardiorespiratory responses of air filtration: A randomized crossover intervention trial in seniors living in Beijing: Beijing Indoor Air Purifier Study, BIAPSY. *Science of the Total Environment*. 2017. 603-604; 541-549.
16. Altemose B, Robson MG, Kipen HM, Ohman-Strickland P, Meng Q, Gong JC, **Huang W**, Wang GF, Rich DQ, Zhu T, Zhang JJ. Association of air pollution sources and aldehydes with biomarkers of blood coagulation, pulmonary inflammation, and systemic oxidative stress. *Journal of Exposure Science and Environmental Epidemiology*. 2017. 27(3):244-250.
17. Han Y, Zhu T, Guan T, Zhu Y, Liu J, Ji Y, Gao S, Wang F, Lu H, **Huang W**. Association between size-segregated particles in ambient air and acute respiratory inflammation. *Science of the Total Environment*. 2016. 565: 412-419.
18. Chen X#, Sun YT#, Han YQ, Shang J, Zhao Q, Song XM, Wu AH, Luan SJ, Zhu T, **Huang W***. Design and Characterization of human exposure to generated sulfate and soot particles in a pilot chamber study. *Journal Air & Waste Manage Assoc*. 2016. 66(4):366-376.
19. Gong JC, Zhu T, Kipen H, Rich DQ, **Huang W**, Lin WT, Hu M, Zhang JJ. Urinary polycyclic aromatic hydrocarbon metabolites as biomarkers of exposure to traffic-emitted pollutants. *Environment International*. 2015. 15; 85: 104-110.
20. Sun YT#, Song XM, Han YQ, Lu SE, Ji YF, Gao SN, Shang Y, Wang T, Zhu T, **Huang W***. Size-fractioned ambient particles and black carbon associated with autonomic dysfunction in subjects with diabetes or impaired glucose tolerance in Shanghai, China. *Particle & Fiber Toxicology*. 2015. 12(1):8. doi:10.1186/s12989-015-0084-6 (PF&T Blog: <http://blogs.biomedcentral.com/on-health/?p=30369>).
21. Lin WW, Zhu T, Xue T, Peng W, Brunekreef B, Gehring U, **Huang W**, Hu M, Zhang YH, Tang XY. Association between changes in air pollution exposure and biomarkers of oxidative stress in children before and during the Beijing Olympics. *American Journal of Epidemiology*. 2015. 181 (8): 675-583.
22. Roy A, Gong JC, Duncan TC, Zhang JJ, Howard KM, Rich DQ, Zhu T, **Huang W**, Hu M, Wang GF, Wang YD, Zhu P, Lu SE, Ohman-Strickland P, Scott DR, Sandrah EP. The cardiopulmonary effects of ambient air pollution and mechanistic pathways: a comparative hierarchical pathway analysis. *Plos One*. 2015. 12; 9(12):e114913. doi:10.1371/journal.pone.0114913.
23. Gong JC, Zhu T, Kipen H, Wang GF, Hu M, Ohman-Strickland P, Lu SE, Wang YD, Zhu P, Rich D, **Huang W**, Zhang JJ. Comparisons of ultrafine and fine particles in their associations with biomarkers reflecting physiological pathways. *Environmental Science and Technology*. 2014. 48(9): 5264-5273.
24. Gong JC, Zhu T, Kipen H, Wang GF, Hu M, Ohman-Strickland P, Lu SE, Zhang L, Wang YD, Zhu P, Rich D, Diehl S, **Huang W**, Zhang JJ. Malondialdehyde in exhaled breath condensate and urine as a biomarker of air pollution induced oxidative stress. *Journal of Exposure Science and Environ Epidemiology*. 2013. 23(3): 322-327..
25. Yuan ZH, Chen Y, Zhang Y, Liu H, Liu Q, Zhao J, Hu M, **Huang W**, Wang GF, Zhu T, Zhang JJ. Changes of plasma vWF level in response to the improvement of air quality: an observation of 114 healthy young adults. *Annals of Hematology*. 2013. 92(4): 543-548.
26. **Huang W**, Wang GF, Lu SE, Kipen H, Wang YD, Hu M, Lin WW, Rich D, Ohman-Strickland P, Diehl SR, Zhu P, Tong J, Gong JC, Zhu T, Zhang JJ. Inflammatory and oxidative stress responses of healthy young adults

- to changes in air quality during the Beijing Olympics. *American Journal of Respiratory and Critical Care Medicine*. 2012. 186 (11): 1150-1159. (with editorial by V Van Hee and CA Pope 3rd on 1076-1077)
27. Rich D†, Kipen H†, **Huang W**†, Wang GF, Wang YD, Zhu P, Ohman-Strickland P, Hu M, Philipp C, Diehl S, Lu SE, Tong J, Gong JC, Thomas D, Zhu T, Zhang JJ. Association between changes in air pollution levels during the Beijing Olympics and biomarkers of inflammation and thrombosis in healthy young adults. *Journal of American Medical Association (JAMA)*. 2012. 307 (19): 2068-2078. (with editorial by F Dominici and MA Mittleman on 2100-2102) (†co-first author)
28. **Huang W**, Zhu T, Pan XC, Hu M, Lu SE, Lin Y, Wang T, Zhang YH, Tang XY. Air pollution and autonomic and vascular dysfunction in patients with cardiovascular disease: interactions of systemic inflammation, overweight, and gender. *Am J Epidemiol*. 2012. 176(2): 117-126.
29. Lin WW, **Huang W**, Zhu T, Hu M, Brunekreef B, Zhang YH, Liu XG, Cheng H, Gehring U, Li CC, Tang XY. Acute respiratory inflammation in children and black carbon in ambient air before and during the 2008 Beijing Olympics. *Environmental Health Perspectives*. 2011. 119(10): 1507-1512.
30. Kipen H, Rich D, **Huang W**, Zhu T, Wang GF, Lu SE, Ohman-Strickland P, Zhu P, Wang YD, Zhang JJ. Measurement of inflammation and oxidative stress following drastic changes in air pollution during Beijing Olympics: a panel study approach. *Annals of New York Academy of Science*. 2010. 1203: 160-167.
31. **Huang W**, Smith TJ, Ngo L, Wang T, Chen HQ, Wu F, Herrick RF, Christiani DC, Ding H. Characterizing and biological monitoring of polycyclic aromatic hydrocarbons in exposures to diesel exhaust. *Environmental Science and Technology*. 2007. 41(8): 2711-2716.

Research Focus II: Risk Assessment and Management

32. Fang JK#, Song J, Wu RS, Xie YF, Xu X, Zeng YP, Zhu YT, Wang T, Yuan NM, Xu HB, Song XM, Zhang QH, Xu BP, **Huang W***. Association between ambient temperature and childhood respiratory hospital visits in Beijing: a time-series study (2013-2017). *Environmental Science and Pollution Research*. 2021. <http://doi.org/10.1007/s11356-021-12817-w> (online).
33. Al-Kindi SG, Sarode A, Zullo M, Brook J, Burnett R, Oliveira GH, **Huang W**, Brook R, Rajagopalan S. Ambient air pollution and mortality after cardiac transplantation. *Journal of the American College of Cardiology* 74:24, pages 3026-3035.
34. Wu RS#, Song XM, Chen DH, Zhong LJ, Huang XL, Bai YC, Hu W, Siqu Ye, Xu HB, Feng BH, Wang T, Zhu YT, Liu S, Chen J, Wang XM, YH Zhang, **Huang W***. Health benefit of air quality improvement in Guangzhou, China: results from a long time-series analysis (2006-2016). *Environment International*. 2019. 126: 552-559.
35. Xie JW, Jin L, He TT, Chen BW, Luo XS, Feng BH#, **Huang W**, Li J, Fu PQ, Li XD. Bacteria and antibiotic resistance genes (ARGs) in PM_{2.5} across China: implications for human exposure. *Environmental Science & Technology*. 2019. 53 (2): 963-972.
36. Feng BH#, Li LJ, Xu HB, Wang T, Wu RS, Chen J, Zhang Y, Liu S, Ho SH, Cao JJ, **Huang W***. PM_{2.5}-bound polycyclic aromatic hydrocarbons (PAHs) in Beijing: seasonal variations, sources, and risk assessment. *Journal of Environmental Sciences*. 2019. 77: 11-19.
37. Li LJ, Ho SH, Xu HB, Feng BH, Xu HB, Wang T, Wu RS, **Huang W**, Qu LL, Wang QY, Cao JJ. Characterization of particulate-bound polycyclic aromatic compounds (PACs) and their oxidations in heavy polluted atmosphere: a case study in urban Beijing, China during haze events. *Science of the Total Environment*. 2019. 660: 1392-1402
38. Wu RS#, Zhong LJ, Huang XL, Song XM, Bai YC, Xu HB, Liu S, Feng BH, Wang T, Wu FC, Wang XM, **Huang W***. Temporal variations in short-term mortality risks associated with particulate matter reduction in Guangzhou, China (2006-2016). *Science of the Total Environment*. 2018. 645: 491-498.

39. Wu RS#, Song XM, Bai YC, Chen J, Liu S, Xu HB, Wang T, Feng BH, Zhang Y, Zhong LJ, Wang XM, Wu FC, **Huang W***. Are current Chinese national ambient air quality standards on 24-hour averages for particulate matters sufficient to protect public health? *Journal of Environmental Sciences*. 2018. 71:67-75.
40. Li JN, Cui Z, Long JY, **Huang W**, Wang JW, Zhang H, Wang HB, Zhang LX, Ronco P, Zhao MH. Primary glomerular nephropathy among hospitalized patients in a national database in China. *Nephrology Dialysis Transplantation*. 2018. 33: 2173-2181. Doi: 10.1093/ndt/gfy022.
41. Li, JN, Cui Z, Long JY, **Huang W**, Wang JW, Wang HB, Zhang LX, Chen M, Zhao MH. The frequency of ANCA-associated vasculitis in a national database of hospitalized patients in China. *Arthritis Research & Therapy*. 2018. 20:226. Doi: 10.1186/s13075-18-1708-7.
42. Loomis D, **Huang W**, Chen GS. IARC evaluation of the carcinogenicity of outdoor air pollution: focus on China. *Chinese Journal of Cancer*. 2014. 33(4): 189-196.
43. WHO/IARC Working Group Members. IARC monograph volume 109 on the evaluation of carcinogenic risks of ambient air pollution to humans: The Carcinogenicity of outdoor air pollution. *The Lancet Oncology*. 2013. 14: 1262-1263.
44. Shang Y, Sun ZW, Cao JJ, Wang XM, Bi XH, Li H, Liu WX, Zhu T, **Huang W***. Systematic review of Chinese studies of short-term exposure to air pollution and daily mortality. *Environment International*. 2013. 54:100-111.
45. Chen RJ, **Huang W***, Wong CM, Wang ZS, Thach TQ, Chen BH, Kan HD, on behalf of the CAPES collaborative group. Short-term exposure to sulfur dioxide and daily mortality in 17 Chinese cities: The China air pollution and health effects study (CAPES). *Environmental Research*. 2012. 118:101-106.
46. **Huang W**, Cao J, Tao Y, Dai LZ, Lu SE, Hou B, Wang W, Zhu T. Seasonal variation of chemical species associated with short-term mortality effects of PM2.5 in Xi'an, a central city in China. *American Journal of Epidemiology*. 2012.175(6), 556-566.
47. Chen RJ, Samoli E, Wong CM, **Huang W**, Wang Z, Chen BH, Kan HD, on behalf of the CAPES collaborative group. Associations between short-term exposure to nitrogen dioxide and mortality in 17 Chinese cities: The China air pollution and health effects study (CAPES). *Environment International*. 2012. 45:32-38.
48. Tao Y#, **Huang W***, Huang XL, Zhong LJ, Lu SE, Li Y, Dai LZ, Zhang Y, Zhu T. Estimated acute effects of ambient ozone and nitrogen dioxide on mortality in the Pearl River Delta of southern China. *Environmental Health Perspectives*. 2012.120(3), 393-398.
49. Chen RJ, Kan HD, Chen BH, **Huang W**, Bai ZP, Song GX, Pan GW, on Behalf of the CAPES Collaborative Group. Association of Particulate Air Pollution with Daily Mortality-The China Air Pollution and Health Effects Study. *American Journal of Epidemiology*. 2012. 175(11): 1173-1181.
50. Yang CX, Peng XW, **Huang W***, Chen RJ, Xu ZC, Chen BH, Kan HD. A Time-stratified case-crossover study of fine particulate matter: air pollution and mortality in Guangzhou, China. *International Arch Occupational and Environmental Health*. 2012. 85(5): 579-585.
51. Tao YB#, Zhong LJ, Huang XL, Lu SE, Li Y, Dai LZ, Zhang YH, Zhu T, **Huang W***. Acute mortality effects of carbon monoxide on mortality in the Pearl River Delta of China. *Journal of Environmental Sciences*. 2011. 410:34-40.
52. **Huang W**, Kan HD, Kovats S. The Impact of the 2003 heat wave on mortality in Shanghai, China. *Journal of Environmental Sciences*. 2010. 408(11):2418-2420.
53. **Huang W**, Tan JG, Kan HD, Zhao N, Song WM, Song GX, Chen GH, Jiang LL, Jiang C, Chen RJ, Chen BH. Visibility, air quality and daily mortality in Shanghai, China. *Journal of Environmental Sciences*. 2009. 407: 3295-3300.
54. Kan HD, **Huang W**, Chen BH, Zhao N. Impact of outdoor air pollution on cardiovascular health in mainland China (Review). *CVD Prevention and Control* 2009. 4: 71-78.

55. Zhang Y, **Huang W**, London SJ, Song GX, Chen GH, Jiang LL, Zhao N, Chen BH, Kan HD. Ozone and daily mortality in Shanghai, China. *Environmental Health Perspectives*. 2006. 114(8):1227-1232.

SELECTED PUBLICATIONS IN CHINESE

56. Zhang QC#, Wang T, Chen J, Wang Y, Feng BH, Zhao Q, Xu HB, Liu SC, Yi TC, Song XM, Li JP, **Huang W***. A panel study on effects of ambient particles of different sizes and from different sources on blood pressure in healthy adults in an urban area of Beijing. *Journal of Environmental and Occupational Medicine*. 2020. 37 (4):
57. Wu J, Song XM, Liu S, Wu RS, **Huang W***. Ambient particulate matter pollution and cancer risk in China. *Science and Technology Review*. 2018. 36(15): 32-38.
58. Wang T#, Song XM, Zhao Q, Chen J, Xu HB, Liu BB, Sun XY, He B, **Huang W***. Effect of short-term exposure to ultrafine particles on lung function in patients with chronic obstructive pulmonary disease in Beijing. *J Environ and Health*. 2018. 35 (6): 471-476.
59. Zhang Y#, Song XM, Zhao Q, Wang T, Li LJ, Chen J, Xu HB, Liu BB, Sun XY, He B, **Huang W***. Effects of exposure to ambient particulate matter and polycyclic aromatic hydrocarbons on oxidative stress biomarkers in patients with chronic obstructive pulmonary disease. *Journal of Peking University (Health Sciences)*. 2017. 49(3): 394-402.
60. Chen J#, Zhao Q, Liu BB, Wang J, Xu HB, Zhang Y, Song XM, He B, **Huang W***. Airway oxidative stress and inflammation markers in chronic obstructive pulmonary diseases (COPD) patients are linked with exposure to traffic-related air pollution: a panel study. *Chin J Prev Med*. 2016. 50(5): 411-417.
61. Huang XL, Dai LZ, Lu P, Shang Y, Li Y, Tao YB, **Huang W***. Time-series analysis of acute mortality effects of air pollution in Guangzhou. *Chin J Epidemiology*. 2012. 33 (2): 210-214.
62. Hou B, Dai LZ, Wang Z, Shang Y, Li Y, Tao YB, **Huang W***. Time-series analysis of acute mortality effects of air pollution in Xi'an. *J Environ and Health*. 2011. 28 (12): 1039-1043.
63. Zhao TY, Wang Q, Li MY, Zhang Y, Liu H, Hu M, Zhang LW, Wang GF, **Huang W**, Zhu T. Short-term changes of air pollution on biomarker variations in young healthy adults. *Chinese Journal of Birth Health & Heredity*. 2009. 17 (7): 8-10.
64. Wang A, **Huang W***, Wang T, Chen Y, Su Y, Zhang LW. Exposure to PM and CO in a cardiovascular panel in Beijing. *China Environ Sciences*. 2009. 9: 1005-1008.

BOOK CHAPTERS /REPORTS

65. Co-authors. WHO Consultation Workshop Report on "Personal Interventions and Risk Communication on Air Pollution". 2020. <https://www.who.int/publications/i/item/9789240000278>
66. Wu RS, **Huang W**. Chapter 32: Haze and Public Health. "Progress in Epidemiology", 13th Edition, People's Medical Publishing House, 2017. ISBN: 9787117252386.
67. Song XM, **Huang W**. Chapter 18: Air Pollution and Cancer. "Air Pollution and Health" , Hubei Science and Technology Publishing Group, China. 2015. ISBN: 9787535283009.
68. **Huang W**. "Criteria Research Priorities and Plan on Air Pollution for 2015-2035" , China Scientific Publishing Group, 2014. ISBN: 9787030400734.
69. Working Group Members. Outdoor Air Pollution/International Agency of Research on Cancer (IARC) Working Group on the Evaluation of Carcinogenic Risks to Human Health, 2013. IARC Monograph Volume 109. ISBN 9789283201472 / ISSN 1017-1606.
70. Anderson HR, Atkinson R, Chen BH, Cohen AC, Greenbaum D, Hedley AJ, **Huang W**, Pande JN, Pope CA,

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- Smith KR (in alphabetic order). Health Effects of Outdoor Air Pollution in Developing Countries of Asia: A Literature Review. 2004. Health Effects Institute. Special Report 15 (www.healtheffects.org/publications).
71. Zhang JJ, Kipen H, Zhu T, Wang GF, **Huang W**, Rich D, Zhu P, Wang YD, Lu SE, Ohman-Strickland P, Diehl S, Hu M, Tong J, Gong JC. Cardio-respiratory Biomarker Responses of Healthy Young Adults to Drastic Air Quality Changes Surrounding the Beijing Olympics. 2014. Health Effects Institute. Research Report 174 (www.healtheffects.org/publications).

SELECTED CONFERENCE PRESENTATIONS/INVITED TALKS

1. Plenary Presentation, Risk Communication and Intervention to Reduce Exposure to Minimize the Health Effects of Outdoor Air Pollution. February 12-14, 2019. Geneva, Switzerland.
2. Invited Speech, Increasing the Value of Weather-related Warnings HIWeather Workshop, World Meteorology Organization / China Meteorology Administration. November 22, 2018. Beijing, China
1. Plenary Presentation, the First World Health Organization Global Conference on Air Pollution and Health: Improving Air Quality, Combating Climate Change – Saving Lives. October 30, 2018. Geneva, Switzerland.
2. Plenary Presentation, the Annual International Symposium of The Research Institute for Sustainable Urban Development, The Hong Kong Polytechnic University. June 29-30, 2018. Hong Kong, China.
3. Invited Speech, the 2017 Meeting of the National Academies of Sciences, Engineering, Medicine' Standing Committee on Medical and Epidemiologic Aspects of Air Pollution. June 30, 2017. Washington DC, USA.
4. Plenary Presentation, 3rd Annual Meeting of the Australia-China Centre for Air Quality Science and Management. November 4-6, 2017. Beijing, China
5. Plenary Presentation, the 12th International Conference and 5th Asian Congress on Environmental Mutagens. November 15, 2017. Incheon, Korea.
6. Keynote Speech, High Level Forum of Chinese Academy of Engineering on Environmental Criteria Research. October 14, 2016, Beijing, China.
7. Keynote Speech, the 5th Sino-French Joint Workshop on Air Quality Improvement and Future Challenges: Sciences, Technologies & Solutions. October 12, 2016. Xi'an, Shanxi Province, China.
8. Plenary Speech, the 48th Asia-Pacific Academic Consortium for Public Health Conference. Sept 19, 2016. Tokyo, Japan.
9. Keynote Speech, the 11th International Particle Toxicology Conference. September 26-30, 2016. Singapore.
10. Keynote Speech, the 48th Asia-Pacific Academic Consortium for Public Health Conference. September 16-18, 2016. Tokyo, Japan.
11. Plenary Speech, the World Health Organization (WHO)-Health Effects Institute Workshop at Better Air Quality in Asia. November 19, 2014. Colombo, Sri Lanka.
12. Plenary Speech, the 4th Asian Conference of Environmental Mutagens. December 10-12, 2014. Kolkata, India.
13. Keynote Speech, the Annual Conference of Michigan Institute for Clinical & Health Research. October 1, 2014. Ann Arbor, Michigan, USA.
14. Plenary Speech, the 26th Annual International Society for Environmental Epidemiology (ISEE) Conference. August 28, 2014. Seattle, Washington, USA
15. Keynote Speech, Scientific Committee on Problems of the Environment and United Nations Educational, Scientific and Cultural Organization (UNESCO). March 30, 2014. Prague, Czech.
16. Plenary Speech, the 8th Semiannual Global Health Centers of Excellence Steering Committee Meeting of National Heart Lung and Blood Institute (NHLBI). April 13, 2013. Beijing, China.
17. Plenary Speech, the 441st Xiangshan Science Conference (香山会议) on the Health Effects of Ambient Fine Particulates PM_{2.5}. October 30-November 1, 2012. Beijing, China.
18. Keynote Speech, the 3rd Asian Association of Environmental Mutagen Society Conference. October 26, 2012. Hangzhou, China.

STUDENT SUPERVISION**Doctoral Students (primary advisor)**

Hongbing Xu (PhD, Peking University School of Public Health graduated in 2019 and now a BoYa post-doc fellow at PKUSPH)

Baihuan Feng (PhD, Peking University School of Public Health, graduated in 2019 and now a junior faculty member at Zhejiang University)

Ronshan Wu (PhD candidate, Peking University School of Public Health, graduated in 2020 and now working at Chinese Research Academy of Environmental Sciences, CRAES)

Jiakun Fang (PhD student, Peking University School of Public Health, expected to graduate in 2022)

Tong Wang (PhD student, Peking University School of Public Health, expected to graduate in 2022)

Yutong Zhu (PhD student, Peking University School of Public Health, expected to graduate in 2023)

Doctoral Students (co-advisor)

Xiaoyan Sun (MD, PhD, 2015-2017, Peking University School of Medicine), now a resident doctor at Department of Respiratory Medicine of Peking University Third Hospital.

Danqing Shao (MS, PhD, 2014-2016, Peking University School of Basic Medical Science), now a research scientist at China Oil & Foodstuffs Corporation (COFCO).

Master Students (primary advisor)

Jie Chen (2014-2016, now a doctoral student at University Utrecht)

Yi Zhang (2015-2017, now an officer at China Health Insurance Group)

Shuo Liu (2015-2018, now a doctoral student at University Denmark) ,

Qiaochi Zhang (2017-)

Yunfei Xie (2018-)

Ningman Yuan (2019-)

Xinpeng Guan (2020-)

Undergraduate Students (academic advisor)

Advisor for Class of 2019 in Preventive Medicine (44 students)

Yitong Sun (2009-2011, obtained a doctorate degree from University of Michigan in 2019)

Yebin Tao (2009-2011, obtained a doctorate degree from University of Michigan in 2016)

Lingzhen Dai (2009-2011, obtained a doctorate degree from Harvard School of Public Health in 2016)

Xi Chen (2010-2013, obtained a doctorate degree from Peking Univ College Environ Sci & Eng in 2018)

Dongmei Luo (2014-), Yu Qi, Teng Yang, Qiaoxin Shi (2016-), Ziwei Zhouhu, Sifan Tian, Yunfei Xing, Xufeng Ye (2017-), Gela Xia, Yalei Ke, Ziyang Chen (2018-)

AWARDS AND RECOGNITION

Grand Challenges Young Scientist, Chinese Ministry of Science and Technology and Melinda & Bill Gates Foundation (2015)

Young Scientist Award, International Institute of Applied System Analysis (Summer 2000)

NIH Fogarty Training Grant, Harvard School of Public Health (1997-2003)

President's Scholarship, Harvard University (1997-2000)

PROFESSIONAL ACTIVITIES**Journal Editors**

Editorial Board Member of *Environmental Epidemiology* (2017-)

Associate Editor of *Science of the Total Environment* (2017-)

Journal Reviewers

Cochrane Public Health, Environmental Health Perspectives, Heart, Arteriosclerosis Thrombosis and Vascular Biology, Environmental Science & Technology, Science of the Total Environment, Environmental Health, British Medical Journal, British Medical Journal open, Indoor Air, Environment International, Journal of Exposure Science and Environmental Epidemiology, Environmental Research, etc

Proposal Reviewer

China Natural Science Foundation (2015-)

Beijing Natural Science Foundation (2018-)

Ministry of Ecology and Environment of China (2015-)

Dissertation and Educational Programm Reviewer

Ministry of Education of China (2018-)