

KAI ZHANG, PH.D.

Professor, Department of Public Health

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SUMMARY

Kai Zhang, MS, MA, PhD, is a Professor in the Department of Public Health at The University of North Texas Health Science Center at Fort Worth (UNT Health). Dr. Zhang's research interest focuses on characterizing environmental exposures, reducing the human health effects associated with disasters, and exploring the role of social and environmental stressors (air pollution, natural environment, built environment, and green space) in relation to chronic diseases. Dr. Zhang currently serves as the Secretary of the International Society of Exposure Science (ISES) and as a standing member for NIH's Social and Environmental Determinants of Health (SEDH) Study Section. He is also an Associate Editor for *Science of the Total Environment* and the *Journal of Exposure Science and Environmental Epidemiology*. His research has been featured in prestigious international journals, including *Nature Medicine*, *Nature Climate Change*, *Nature Communication*, *Science Advances*, *Circulation*, *Circulation Research*, *American Journal of Respiratory and Critical Care Medicine*, *Environmental Health Perspectives*, and *Environmental Science & Technology*, among others.

EDUCATION

UNIVERSITY OF MICHIGAN, ANN ARBOR

Research Fellow, Departments of Environmental Health Sciences and Epidemiology

UNIVERSITY OF MICHIGAN, ANN ARBOR

Ph.D., Department of Environmental Health Sciences

M.A., Department of Statistics

TSINGHUA UNIVERSITY, Beijing, China

M.S., Department of Environmental Science and Engineering

SOUTHEAST UNIVERSITY, Nanjing, China

B.S. with honors, Department of Environmental Engineering; minor in Accounting

EDUCATIONAL EMPLOYMENT

THE UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER AT FORT WORTH

Dept. of Public Health

Professor

2025 – present

UNIVERSITY AT ALBANY, STATE UNIVERSITY OF NEW YORK

Dept. of Environmental Health Sciences

Empire Innovation Associate Professor

2021 – 2024

UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON

Dept. of Epidemiology, Human Genetics and Environmental Sciences

Associate Professor

2020

Assistant Professor

2012 – 2020

Assistant Professor (secondary appointment), Dept. of Biostatistics and Data Science

2015 – 2020

ACTIVE GRANT FUNDING

Active Research Support:

NIH/NIA R01AG081244	Hou, Zhang , and Liu (MPIs)	2022-2027
Epigenomic landscape of individual- and neighborhood-level social disadvantages and cardiovascular health disparity		
Role: MPI		
NIH U01AG088658	Chen, Hou, Yaffe and Jones (MPIs)	2024-2029
Early mid-life environmental toxicant exposures and AD/ADRD risk in CARDIA		
Role: Subcontract PI		

PEER-REVIEWED PUBLICATIONS (*, corresponding author; __, mentored students or postdoc)

Highlights: Published in top-tier journals, including *Circulation*, *Circulation Research*, *Nature Medicine*, *Nature Climate Change*, *Nature Communications*, *Science Advances*, *Environmental Health Perspective*, and *Environmental Science & Technology*.

207. Gao T, Zheng Y, Joyce BT, Liu L, Liu L, Kiefe C, Forrester S, Gordon-Larsen P, Liu C, Lloyd-Jones D, **Zhang K***, Hou L*. 2026. Developing a novel index for neighborhood social determinants of cardiovascular diseases in the CARDIA study. **Nature Communications**.17(1):4622.
206. Juarez LD, Kulczycki A, Oates GR, **Zhang K**, Mutlu GM, Parthasarathy S. 2026. Air Pollution Within the Public Health Exposome Framework: Impacts on Cardiovascular Health. *Current Epidemiology Reports*.13(1):13.
205. Chen Y, Zheng Y, Zhao L, Gao T, Qu Y, Carr JJ, Terry JG, Ning H, Kim K, Long MT, Zhang X, Wilkins JT, Chen A, **Zhang K**, Allen NB, Lloyd-Jones DM, Hou L, Zhang X. 2026. Cumulative lipid exposure in young adulthood and risk of midlife MASLD. *JHEP Reports*.8(3):101679.
204. Liu X, Ding Z, Yuchi Y, Li R, Liao W, Dong X, Huo W, Hou J, Lin H, Liu X, **Zhang K**, Wang C. 2026. Obesity mediates the association of outdoor artificial light at night with type 2 diabetes mellitus. *iScience*. 29(3):115036.
203. Yuan X, Li X, Wang C, Lim E, Wei Y, Jin R, Weng L, Karasaki T, Luo H, Qing L, Zhou Z, Jiang Q, Chervova O, Yang F, Wu F, **Zhang K**, Chang C-Y, Kheradmand F, Sheng J, Carbone D, Wang J, Chen K. 2026. Hallmarks of lung cancer driven by inhalable particulate matter: From cell-intrinsic oncogenic traits to microenvironment remodeling. *The Innovation*. 101347.
202. Burrows BT, Sloane R, Ashner MC, Pieper CF, Lewis CE, Gabriel KP, Schreiner PJ, Hornikel B, **Zhang K**, Jenkins NDM, Sullivan A, Bowling CB. 2026. Associations of depressive symptoms and antidepressant medication use with physical function among middle-aged adults: Results from the CARDIA Function study. *Journal of Affective Disorders*. 401:121324.
201. Zhang X, Zhao L, **Zhang K**, Vlahov D, Chen Y, Hsing A, Nguyen MH, McGlynn KA, Taddei T, Hou L, Zhang X. 2026. Social determinants disadvantage score and liver health in the All of Us Research Program. *European Journal of Epidemiology*. 41(2):207-216.
200. Sun Y, Zhang R, Tian L, Liu T, Pan Y, Sun X, Huang Z, Fan J, Chen J, **Zhang K**, Li S, Chen W, Bazzano LA, He J, Bundy JD, Kelly TN, Li C. 2025. Associations of plasma inosine with lipid parameters in a biracial community cohort. *Clinical Nutrition*. 55:113-23.
199. Qi X, Sui J, Yang Z, Dahlen A, **Zhang K**, Wu B. 2025. Periodontitis, accelerated biological aging, and advanced stages in cardiovascular-kidney-metabolic syndrome in U.S. Adults: A mediation analysis. *Diabetes Research and Clinical Practice*.228: 112437.
198. Su S, Lewis TT, Belsky DW, Liu Y, **Zhang K**, Snieder H, Wang X. 2025. Impact of psychosocial stress in early life on pace of aging in young adulthood. *Clinical Epigenetics*.17(1):186.

197. Bai L, Jiang Y, **Zhang K**, Su H, Sun S, Deng F, Baccarelli AA, Shi X, Guo X, Wu S. 2025. Associations of ambient particulate matter and nitrogen dioxide with hospital admissions for Parkinson's disease: A nationwide case-crossover study in China. *Environmental Pollution*. 385:127062.
196. Lai M, Kim K, Zheng Y, Castellani CA, Ratliff SM, Wang M, Liu X, Haessler J, Huan T, Bonsu K, Newcomb C, McKessy K, Bielak LF, Zhao W, Joehanes R, Ma J, Guo X, Manson JE, Grove ML, Bressler J, Taylor KD, Lappalainen T, Kasela S, Blackwell TW, Lake NJ, Faul JD, Ferrier KR, Ekker SC, Hou L, Kooperberg C, Reiner AP, **Zhang K**, Peyser PA, Fornage M, Boerwinkle E, Raffield LM, Carson AP, Rich SS, Liu Y, Levy D, Rotter JI, Smith JA, Arking DE, Liu C, Arking DE, Castellani CA, Manson JE, Zhao W, Liu C. 2025. Epigenome-wide association study of nuclear DNA methylation in relation to mitochondrial heteroplasmy. *Nature Communications*. 16: 10962.
195. Wang M, Zheng Y, Lai M, Saake E, Liu X, Guo X, Taylor KD, Huan T, Joehanes R, Nannini DR, **Zhang K**, Lake NJ, Castellani CA, Rich SS, Rotter JI, Liu Y, Raffield LM, Carson AP, Fornage M, Ma J, Arking DE, Hou L, Levy D, Liu C. 2025. Association of Epigenetic Age Acceleration and Mitochondrial DNA-Based Aging Metrics Provides Insights Into Mechanisms of Aging-Related Diseases. *Aging Cell*.24(12):e70279.
194. Li S, Spector JT, Choi SD, Zhao M, Scott E, Germain CM, **Zhang K***. 2025 Health, Safety, and Aging in Elderly Farmers in the United States and Beyond: A Systematic Scoping Review. *J Agromedicine*. 30(4):812-32.
193. Han S, Hartert T, Zhang J, Su W-C, Wu P, Huang Y, Lu Q, Wang H, Zhao H, Su Y, Hu M, **Zhang K***. 2025. Energy burden and asthma prevalence in U.S. cities: An emerging social determinant of health. *Science of The Total Environment*.1000:180371.
192. Hurley R, Mangoubi O, **Zhang K**, Liu S. 2025. Impact of mask-wearing-related CO2 exposure on performance – A global survey. *Building and Environment*.285:113537.
191. Han S, Hu M, Huang Y, Zhang M, L Li C, ao X-Q, Liu S, Wijerathna T, Lee HY, Choi EY, Choi YJ, Du X, **Zhang K***. 2025. Energy Burden and Chronic Kidney Disease: A National Study in the United States. *Environment & Health*. 3(9): 1074–1082
190. Meng S, Wang W, **Zhang K***. 2025. Beyond wind and rainfall: insights into Hurricane Helene fatalities with the National Risk Index. *npj Natural Hazards*.2(1):38.
189. Zhao D, Yao J, Li Y, Jacobs DR, Gao T, Nie LH, Wu CO, Tokac U, Li S, Zhao H, Lloyd-Jones D, Hou L, **Zhang K***. 2025. Urban imperviousness and carotid intima-medial thickness: Evidence from the Coronary Artery Risk Development in Young Adults (CARDIA) study. *Science of The Total Environment* 978:179376.
188. Zhao D, Yao J, Li Y, Jacobs DR, Zheng Y, Liu C, Fu Y, Deangelis MM, Lloyd-Jones D, Hou L, **Zhang K***. 2025. Associations of long-term exposure to temperature with coronary artery calcification risk among middle-aged adults: The Coronary Artery Risk Development in Young Adults (CARDIA) study. *Science of The Total Environment*.966:178675
187. Wong R, Zhang L, **Zhang K***. 2025. Sociodemographic factors and vulnerability to multiple extreme weather events: A national study in the U.S. *Science of The Total Environment* 967:178761.
186. Domanski M, Wu C, Tian X, Li H, Shalhoub R, Miao R, Hasan Ahmed A, Huang Y, Reis Jared P, Fleg Jerome L, Rana Jamal S, **Zhang K**, Hicks A, Allen Norrina B, Ning H, Bae S, Jacobs David R, Lloyd-Jones Donald M, Fuster V. 2025. Association of Race With Risk of Incident Cardiovascular Disease, Coronary Heart Disease, Heart Failure, and Stroke. *JACC: Advances*.4(6_Part_1):101811.
185. Gao T, Zheng Y, Joyce B, Liu L, Liu L, Kiefe C, Forrester S, Yu B, Bhatt A, Gordon-Larsen P, Lloyd-Jones D, **Zhang K***, Hou L. Developing a Novel Index for Individual-Level Social Determinants and Cardiovascular Diseases in the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *International Journal of Environmental Research and Public Health*.22(3):422.
184. Ghorbany S, Hu M, Yao S, Sisk M, Wang C, **Zhang K**, Nguyen QC. 2025. Data driven assessment of built environment impacts on urban health across United States cities. *Scientific Reports*15(1):19998.
183. Ghorbany S, Hu M, Yao S, Wang C, Sisk M, Nguyen QC, **Zhang K**.2025. Intersecting Paths to Health: A Factor Analysis Approach to Socioeconomic and Environmental Determinants in Indiana. *International Journal of Environmental Research and Public Health*. 22(2):219.

182. Gong Y, Haeri M, Zhang X, Li Y, Liu A, Wu D, Zhang Q, Michal Jazwinski S, Zhou X, Wang X, **Zhang K**, Jiang L, Chen Y-P, Yan X, Swerdlow RH, Shen H, Deng H-W. 2025. Stereo-seq of the prefrontal cortex in aging and Alzheimer's disease. **Nature Communications** 16(1):482.
181. Han B, Xu J, **Zhang K**. 2025 Advancing air pollution exposure assessment model: challenges and future perspectives. *Journal of Environmental Exposure Assessment* 4(1):6.
180. He S, Li H, Yan Y, **Zhang K**, and Cai H.2025. Quantifying the Environmental Light Exposure to Human Eyes. *LEUKOS*.1-35.
179. Jia N, Li Y, Jiang Z, Su R, Lan X, **Zhang K**, Song W, Zhao R, Xia Z, Song Y, Zhang Z, Wang M, Wang R, Zhang Z, Chen R. 2025. Climate change, social environment, health, and urban inequality: Developing a novel adaptive evaluation framework. *Sustainable Cities and Society*. 127:106443.
178. Li C, **Zhang K**, Yang S, Jia P. 2025. Editorial: Spatial epidemiology. *Frontiers in Public Health*. 12. doi: 10.3389/fpubh.2024.1522631.
177. Li N, Borate SN, **Zhang K**, Zuber M, Han Y, Chudasama D, Correia S, Renzi-Hammond L. 2025. Mapping disparities in access to lecanemab in Georgia. *Alzheimer's & Dementia*.21(4):e70100.
176. Liu C, He L, Xiao Y, Zhao H, Yang Z, Wei H, Chen H, Liu T, **Zhang K**, Luo B. 2025. Decoding the Enigmatic Link Between Sensory Impairment and Organic Mental Disorders: Insights From Biological Aging and Social Support in a Population Cohort Study. *Journal of the American Medical Directors Association* 26(8): 105709.
175. Liu H, Lei J, Liu Y, Zhu T, Chan K, Chen X, Wei J, Deng F, Li G, Jiang Y, Bai L, Wang K, Chen J, Lan Y, Xia X, Wang J, Wei C, Li Y, Chen R, Gong J, Duan X, **Zhang K**, Kan H, Shi X, Guo X, Wu S. 2025. Hospital admissions attributable to reduced air pollution due to clean-air policies in China. **Nature Medicine**. 31: 1688–1697.
174. Liu L, Zhang H, Zheng Y, Gao T, Zheng C, **Zhang K**, Hou L, Liu L. 2025. High-dimensional mediation analysis for longitudinal mediators and survival outcomes. *Briefings in Bioinformatics*. 26(3). doi: 10.1093/bib/bbaf206.
173. Ma C, Qiang Y, **Zhang K**. 2025. Uneven heat burden in the sunshine state: Spatial patterns and socio-economic disparities of heat-related illness in Florida. *Science of The Total Environment*. 958:177985.
172. Meng S, Qi L, Wu P, Cao S, **Zhang K**, Wang Z, Duan X. 2025 Comprehensive review of intake fraction methods for assessing traffic-related air pollution exposure: insights, variations, and future directions. *J Expo Sci Environ Epidemiol*. Epub 20250617.
171. Shen J, Guan Y, Gururaj S, **Zhang K**, Song Q, Liu X, Bear HD, Fuemmeler BF, Anderson RT, Zhao H. 2025. Neighborhood Disadvantage, Built Environment, and Breast Cancer Outcomes: Disparities in Tumor Aggressiveness and Survival. *Cancers*.17(9):1502.
170. Wang X, Gu Y, Wang Y, Qiu Y, Chen T, Hopke PK, **Zhang K**, Lin S, Qu Y, Lin Z, Deng X, Sun J, Zhu S, Deng X, Li S, Lin X, Du Z, Hao Y, Zhang W. 2025. The role of environmental access to exercise opportunities in cardiovascular mortality: evidence from a nationwide study. *BMC Medicine*.23(1):228.
169. Wu G, Wang S, Wu W, Benmarhnia T, Lin S, **Zhang K**, Romeiko XX, Gu H, Qu Y, Xiao J, Deng X, Lin Z, Du Z, Zhang W, Hao Y. 2025. Potential causal links of long-term PM_{2.5} components exposure with diabetes incidence and mortality in the United States. *Sustainable Cities and Society* 119:106071.
168. Xiao Y, Ma R, Liu C, Wei H, Zhou B, Gui C, Yang B, Cao Y, **Zhang K**, Luo B. 2025. Insights into Pulmonary Heart Disease at High Altitude: Hypoxia and PM_{2.5} Interactions. *Am J Respir Crit Care Med*. 211(4):660-3.
167. Zhang Y, Wei J, Chen S, Benmarhnia T, **Zhang K**, Wang X, Deng X, Gu H, Lin Z, Qu Y, Xiao J, Jiang J, Du Z, Zhang W, Hao Y. 2025. Individual and mixed associations between fine particulate matter components and hospital admissions for hypertension: Insights from a large-scale South Chinese cohort study. *Sustainable Cities and Society*. 124:106293.
166. Zhou E, Zhou B, Zhang L, Chen H, Guo J, **Zhang K**, Luo B. 2025. The effect and burden of sand-dust storms on asthma hospitalization: Evidence from cities with arid climate in China. *Environ Res*.264:120345.

165. Zhou E, Zhang L, He L, Xiao Y, **Zhang K**, Luo B. 2024. Cold exposure, gut microbiota and health implications: A narrative review. *Science of The Total Environment*. 916:170060.
164. **Zhang K***, Dang Y, Li Y, Tao C, Hur J and He Y. 2024. Impact of climate change on vaccine responses and inequity. *Nature Climate Change* 14, pages 1216–1218
163. Kim K, Yao J, Jacobs DR, Martin RV, van Donkelaar A, Su WC, Zhang C, Chen X, Murthy VL, Zhang X, Lloyd-Jones D, Hou L, **Zhang K***. 2024. Associations of exposure to PM_{2.5} and its compounds with carotid intima-media thickness among middle-aged adults. *Science of The Total Environment* 955: 177098.
162. Han S, Hu M, Gao X, Huang Y, Guo F, Shen GC, Wang D, Lin S, **Zhang K***. 2024. Energy burden and mental health: A national study in the United States *Science of The Total Environment* 2024 955:176796.
161. Joyce BT, Yao J, Zheng Y, Gao T, Nannini S, Lin S, Li X, Meliker J, Song Q, Jacobs DR, Lloyd-Jones D, Hou L, **Zhang K***. 2024. Temperature and carotid intima-medial thickness: The coronary artery risk development in young adults (CARDIA) study. *Science of The Total Environment* 954: 176573.
160. Tang Z, Zhou M, **Zhang K**, Song Q. 2024. scPerb: Predict single-cell perturbation via style transfer-based variational autoencoder. *J Adv Res* :S2090-1232(24)00489-2.
159. Hu M, Han S, Ghorbany S, **Zhang K**. 2024. Healthy Aging in Place with the Aid of Smart Technologies: A Systematic Review. *Encyclopedia*.4(4):1918-1932.
158. Guan Y., Shen J., **Zhang K.**, Fuemmeler BF, Zhao H. 2024. Allostatic Load, Cigarette Smoking, and Lung Cancer Risk. *Cancers* 16(18): 3235.
157. Guo C, Loo B PY, Feng K, Gao H, **Zhang K**. 2024. Fifteen Pathways between Electric Vehicles and Public Health: A Transportation–Health Conceptual Framework. *Environment & Health* 2(12): 848-853.
156. Zhao X, Zhou Y, Li X, Zhang T, Wang Y, Zhu Z, **Zhang K**, Li D. 2024. Improving assessment of population exposure and health impacts to PM_{2.5} with high spatial and temporal data. *GIScience & Remote Sensing* 61(1): 2388921.
155. Liu C, Yang Z, He L, Xiao Y, Zhao H, Zhang L, Liu T, Chen R, **Zhang K**, Luo B. 2024. Optimal lifestyle patterns for delaying ageing and reducing all-cause mortality: insights from the UK Biobank. *European Review of Aging and Physical Activity*. 21(1): 27.
154. Sun Y, Zhang R, Tian L, Pan Y, Sun X, Huang Z, Fan J, Chen J, **Zhang K**, Li S, Chen W, Bazzano L, Kelly T, He J, Bundy J, Li C. 2024. Novel Metabolites Associated with Blood Pressure After Dietary Interventions. *Hypertension* 81(9): 1966-1975.
153. Kim K, Joyce B, Zheng Y, Nannini D, Wang J, Gordon-Larsen P, Bhatt A, Gabriel KP, Shikany J, Hu M, Chen A, Reges O, Carnethon M, Lloyd-Jones D, **Zhang K***, Hou L*. 2024. Associations of urban blue and green spaces with coronary artery calcification in Black individuals and disadvantaged neighborhoods. *Circulation* 150(3):203-214.
152. Perry AS, **Zhang K**, Murthy VL, Choi B, Zhao S, Gajjar P, Colangelo LA, Hou L, Rice MB, Carr JJ, Carson AP, Nigra AE, Vasan RS, Gerszten RE, Khan SS, Kalhan R, Naylor M, Shah RV. Proteomics, Human Environmental Exposure, and Cardiometabolic Risk. **Circulation Research**. 135(1):138-154.
151. Du S, Chien L-C, Bush KF, Giri S, Richardson LA, Li M, Jin Q, Li T, Nicklett EJ, Li R, **Zhang K***. 2024. Short-term associations between precipitation and Gastrointestinal illness-related hospital admissions: A multi-city study in Texas. *Science of the Total Environment*. 951 (15): 175247
150. Liu C, He L, Shan X, Zhang L, Ge E, **Zhang K**, Luo B. 2024. The Burden of Occupational Noise-Induced Hearing Loss From 1990 to 2019: An Analysis of Global Burden of Disease Data. *Ear and Hearing* 9900.
149. Zhang L, Zhou E, Liu C, Tian X, Xue B, **Zhang, K**. Luo B. 2024. Avian influenza and gut microbiome in poultry and humans: A “One Health” perspective. *Fundamental Research* 4 (3), 455-462.
148. Sun Y, Zhang R, Tian L, Pan Y, Sun X, Huang Z, Fan J, Chen J, **Zhang K**, Li, S.; et al.2024 Novel Metabolites Associated With Blood Pressure After Dietary Interventions. *Hypertension* 0 (0). DOI: doi:10.1161/HYPERTENSIONAHA.124.22999.

147. Feng H, Ge E, Grubic N, Liu X, Zhang H, Sun Q, Wei X, Zhou F, Huang S, Chen Y, Guo H, Li J, **Zhang K**, Luo M, Chen L. 2024 Coarse particulate air pollution and mortality in a multidrug-resistant tuberculosis cohort. *Science of The Total Environment* 2024, 946, 174048.
146. Lao XQ, Bo Y, Chen D, Zhang K, Szeto C.-C. Environmental pollution to kidney disease: an updated review of current knowledge and future directions. *Kidney International* 2024, 106 (2), 214-225.
145. Wang X, Zhang Y, Tarik B, **Zhang K**, Lin S, Deng X, Gu H, Wu W, Lin X, Du Z, et al., 2024. The effect of residential greenness on cardiovascular mortality from a large cohort in South China: An in-depth analysis of effect modification by multiple demographic and lifestyle characteristics. *Environment International* 190:108894.
144. Hu M, **Zhang K***, Su KJ, Qin T, Shen H, Deng HW. 2024. Unveiling the Link between Physical Activity Levels and Dementia Risk: Insights from the UK Biobank Study, *Psychiatry Research*: 115875. <https://doi.org/10.1016/j.psychres.2024.115875>.
143. Yao J, Zheng Y, Shen J, Joyce B, T, Hao K, Shah R, V, Murthy V, L, Sidney S, Lloyd-Jones D, Hou L, & **Zhang K***, 2024, Racial Disparity in PM2.5 Species and DNA Methylation in CARDIA: An Epigenome-wide Association Study, *The Innovation Medicine* 2(2): 100061,
142. **Zhang K**, Lin J, Li Y, Sun Y, Tong W, Li F, Chien LC, Yang Y, Su W,-C, Tian H, Fu P, Qiao F, Romeiko X, X, Lin S, Luo S, & Craft E. 2024. Unmasking the sky: high-resolution PM_{2.5} prediction in Texas using machine learning techniques, *Journal of Exposure Science & Environmental Epidemiology*, <https://doi.org/10.1038/s41370-024-00659-w>
141. Yu M, Zhang S, Ning H, Li Z, & **Zhang K**. 2024. Assessing the 2023 Canadian wildfire smoke impact in Northeastern US: Air quality exposure and environmental justice, *Science of The Total Environment* 926 171853.
140. Yuan H, Kehm R, D, Daaboul J, M, Lloyd S, E, McDonald J, A, Mu L, Tehranifar P, **Zhang K**, Terry M, B, & Yang W. 2024. Cancer incidence trends in New York State and associations with common population-level exposures 2010–2018: an ecological study, *Scientific Reports* 14(1): 7141.
139. Huang Y, Li Y, Li R, & **Zhang K**. 2024. The privilege of working from home and health disparities during the covid-19 pandemic in major American cities, *Health & Place* 86: 103183.
138. Beauchamp A, M, Shen G, C, Hussain S, H, Adam A, Highfield L, & **Zhang K**. 2024. Cultural context index: A geospatial measure of social determinants of health in the United States, *SSM - Population Health* 25: 101591.
137. Chung M, K, House J, S, Akhtari F, S, Makris K, C, Langston M, A, Islam K, T, Holmes P, Chadeau-Hyam M, Smirnov A, I, Du X, Thessen A, E, Cui Y, **Zhang K**, Manrai A, K, Motsinger-Reif A, Patel CJ. 2024. Decoding the exposome: data science methodologies and implications in exposome-wide association studies (ExWASs), *Exposome* 4(1), <https://doi.org/10.1093/exposome/osae001>
136. Hu X, Hu Z, Xu T, **Zhang K**, Lu H, H, Zhao J, Boerwinkle E, Jin L, & Xiong M, (2024), Equilibrium points and their stability of COVID-19 in US, *Scientific Reports* 14(1) 1628, 136.
135. Yang H-Y, Chou H-L, Leow CHW, Kao CC, Daniel D, Jaladara V, Khoe LC, Latha PK, Mahendradhata Y, Nguyen PM, Sirijatuphat R, Soemarko DS, Venugopal V, **Zhang K**, & Lee JKW. 2024. Poor personal protective equipment practices were associated with heat-related symptoms among Asian healthcare workers: a large-scale multi-national questionnaire survey. *BMC Nursing*, 23(1), 145.
134. Ciciora D, Vasquez E, Valachovic E, Hou L, Zheng Y, Xu H, Jiang X, Huang K, Gabriel KP, Deng HW, Gallant MP, **Zhang K***. 2024. Social and Behavior Factors of Alzheimer's Disease and Related Dementias: A National Study in the U.S. *American Journal of Preventive Medicine*. 66 (4): 573-581
133. Gao T, Zheng Y, Joyce BT, Kho M, Terry JG, Wang J, Nannini D, Carr JJ, Nair S, **Zhang K**, Zhao W, Jacobs DR, Schreiner PJ, Greenland P, Lloyd-Jones D, Smith JA, Hou L. 2024. Epigenetic Aging is Associated with Measures of Midlife Muscle Volume and Attenuation in CARDIA Study. *The Journals of Gerontology: Series A*. 79(3): glad261.
132. Zhao H, He L, Liu C, Shan X, Gui C, Zhang L, Yu Y, Xiao Y, Xue J, **Zhang K***, Luo B*. 2024. Self-harm and

interpersonal violence due to high temperature from the global burden of disease study 2019: A 30-year assessment. *Environmental Research* 243: 117826,

131. Su WC, Lee J, Afshar M, **Zhang K**, Han I. 2024. Assessing community health risks from exposure to ultrafine particles containing transition metals in the Greater Houston Area. *Science of The Total Environment* 912: 169067.
130. Guo C, Ge E, Yu M, Li C, Lao X, Li S, Glaser J, He Y, Almeida-Silva M, Meng S, Su WC, Zhang J, Lin S, **Zhang K***. 2024. Impact of heat on emergency hospital admissions related to kidney diseases in Texas: Uncovering racial disparities. *Science of The Total Environment* 909: 168377.
129. Wu R, Kang N, Zhang C, Song Y, Liao W, Hong Y, Hou J, **Zhang K**, Tian H, Lin H, Wang C. 2024 . Long-term exposure to PM_{2.5} and its components is associated with elevated blood pressure and hypertension prevalence: Evidence from rural adults. *Journal of Advanced Research*. 60: 173-181.
128. Guo C, Ge E, Lee S, Lu Y, Bassill NP, Zhang N, Zhang W, Lu Y, Hu Y, Chakraborty C, Emeny RT, **Zhang K***. 2024. Impact of Heat on Emergency Hospital Admission in Texas: Geographic and Racial/Ethnic Disparities. Accepted by *Journal of Exposure Science and Environmental Epidemiology*. 34: 927–934.
127. Li Y, Huang Y, Li R, **Zhang K***. 2024. Historical redlining and park use during the COVID-19 pandemic: evidence from big mobility data. *Journal of Exposure Science and Environmental Epidemiology*. 34: 399–406.
126. Xu R, Huang X, **Zhang K**, Lyu W, Ghosh D, Li Z, Chen X. 2023. Integrating human activity into food environments can better predict cardiometabolic diseases in the United States. **Nature Communication** 14: 7326.
125. Li Z, Zhang K, Talebi Y, Wu H, Chan W, Boerwinkle E, Xiong M. 2023. Causal Inference for Estimation of Vaccine Effects from Time-to-Event. *Data. Global J Appl Sci Technol* 5(2): 157
124. Wu X, Chen WY, **Zhang K**, Lu Y. 2023. The dynamic impact of COVID-19 pandemic on park visits: A longitudinal study in the United States. *Urban Forestry & Urban Greening* 90: 128154.
123. Xiao Y, Liu C, Lei R, Wang Z, Wang X, Tian H, Xue B, Zhou E, **Zhang K***, Hu J*, Luo Bin*. 2023. Associations of PM_{2.5} composition and green space with metabolic syndrome in a Chinese essential hypertensive population. *Chemosphere* 343: 140243
122. Zheng Y, He Y, Kang N, Zhang C, Liao W, Yuchi Y, Liu X, Hou J, Mao Z, Huo W, **Zhang K**, Tian H, Lin H, Wang C. 2023 .Associations of Long-Term Exposure to PM_{2.5} and Its Constituents with Erythrocytosis and Thrombocytosis in Rural Populations. *Toxics* 11:885
121. Su W-C, Lee J, **Zhang K**, Wong S-W, Buu A. 2023. Estimation of Health Risks Caused by Metals Contained in E-Cigarette Aerosol through Passive Vaping. *Toxics*. 11(8):684.
120. Liu C, He L, Li Y, Yang A, **Zhang K**, Luo B. 2023. Diabetes Risk Among US Adults with different Socioeconomic Status and Behavioral Lifestyles: Evidences from the National Health and Nutrition Examination Survey. *Frontiers in Public Health*. 11:1197947.
119. Wu R, Kang N, Zhang C, Song Y, Liao W, Hong Y, Hou J, **Zhang K**, Tian H, Lin H, Wang C. 2023. Long-term exposure to PM_{2.5} and its components is associated with elevated blood pressure and hypertension prevalence: Evidence from rural adults. *Journal of Advanced Research*. S2090-1232(23)00204-7. doi: 10.1016/j.jare.2023.07.012. PMID: 37517519.
118. Tsoi KH, Loo BPY, Li X, **Zhang K**. 2023. The co-benefits of electric mobility in reducing traffic noise and chemical air pollution: Insights from a transit-oriented city. *Environment International* 178:108116.
117. Yu M, Zhang S, **Zhang K**, Yin J, Varela M and Miao J. 2023. Developing high-resolution PM_{2.5} exposure models by integrating low-cost sensors, automated machine learning, and big human mobility data. *Frontiers in Environmental Science* 11:1223160.
116. Wu G, Wang S, Jiang Z, Hopke PK, Rich DQ, Chen L, Lin S, **Zhang K**, Romeiko XX, Qu Y, Deng X, Lin Z, Xiao J, Zhang W, Hao Y. 2023. Spatial-temporal pattern of tuberculosis mortality in China and its relationship with long-term PM_{2.5} exposure based on a causal inference approach. *Environmental Research Letters* 18:084006.

115. Du S, Yao J, Shen G, Lin B, Udo T, Hastings J, Wang F, Wang F, Zhang Z, Ye X, **Zhang K***. 2023. Social Drivers of Mental Health: A U.S. Study Using Machine Learning. *American Journal of Preventive Medicine*. 65(5):835 – 843.
114. Kim K, Joyce B, Nannini DR, Zheng Y, Gordon-Larsen P, Shikany J, Lloyd-Jones DM, Hu M, Nieuwenhuijsen M, Vaughan DE, **Zhang K***, Hou L*. 2023. Inequalities in urban greenness and epigenetic aging: Different associations by race and neighborhood socioeconomic status. **Science Advances** 9: eadf8140.
113. **Zhang K***, Brook RD, Li Y, Rajagopalan S, Kim JB*. 2023. Air Pollution, Built Environment, and Early Cardiovascular Disease. **Circulation Research** 132(12): 1707-1724.
112. Li D, Zhang Y, Li X, **Zhang K**, Lu Y, Brown R. 2023. Climatic and Meteorological Exposure and Mental and Behavioral Health A Systematic Review and Meta-Analysis. *Science of The Total Environment* 892:164435.
111. Kim K, Yaffe K, Rehkopf D, Zheng Y, Nannini D, Perak A, Nagata JM, Miller G, **Zhang K**, Lloyd-Jones DM, Joyce BT, Hou L. 2023. Adverse childhood experiences are associated with accelerated epigenetic aging in midlife. *JAMA Network Open* 6(6):e2317987.
110. Guo C, Lanza K, Li D, Zhou Y, Aunan K, Loo B, Lee J, Luo B, Duan X, Zhang W, Zhang Z, Lin S, **Zhang K***. 2023. Impact of heat on all-cause and cause-specific mortality: A multi-city study in Texas. *Environmental Research* 224: 115453.
109. Figueroa-Solis E, Gimeno Ruiz de Porras D, Rojas-Garbanzo M, Whitehead L, **Zhang K**, Delclos GL. 2023. Prevalence and Geographic Distribution of Self-Reported Chronic Kidney Disease and Potential Risk Factors in Central America. *International Journal of Environmental Research and Public Health* 20(2):1308.
108. Hu M, **Zhang K**, Nguyen Q, Tasdizen T. 2023. The effects of passive design on indoor thermal comfort and energy savings for residential buildings in hot climates: A systematic review. *Urban Climate* 49: 101466.
107. Sun F, Yao J, Du S, Qian F, Appleton A, Tao C, Xu H, Liu L, Dai Q, Joyce B, Nannini D, Hou L, **Zhang K***. 2023. Social Determinants, Cardiovascular Disease, and Health Care Cost: A Nationwide Study in the United States Using Machine Learning. *Journal of the American Heart Association* 12(5): e027919
106. Tian T, Lin X, Huang T, **Zhang K**, Shi C, Wang P, Chen S, Guo T, Li Z, Qin P, Liang B, Zhang W, Hao Y. 2023. The risk of injuries during work and its association with precipitation: New insight from a sentinel-based surveillance and a case-crossover design. *Frontier Public Health* 11:1117948.
105. Wang Y, Du Z, Zhang Y, Chen S, Lin S, Hopke PK, Rich DQ, **Zhang K**, Romeiko X, Deng X, Qu Y, Liu Y, Lin Z, Zhu S, Zhang W, Hao Y. 2023. Long-term exposure to particulate matter and COPD mortality: Insights from causal inference methods based on a large population cohort in southern China. *Science of The Total Environment* 863: 160808.
104. Luo L, Bai X, Lv Y, Liu S, Guo Z, Liu W, Hao Y, Sun Y, Hao J, **Zhang K**, Zhao H, Lin S, Zhao S, Xiao Y, Yang J, Tian H. 2023. Exploring the driving factors of haze events in Beijing during Chinese New Year holidays in 2020 and 2021 under the influence of COVID-19 pandemic. *Science of The Total Environment* 859: 160172.
103. Kang N, Wu R, Liao W, Zhang C, Liu X, Mao Z, Huo W, Hou J, **Zhang K**, Tian H, Lin H, Wang C. 2023. Association of long-term exposure to PM2.5 constituents with glucose metabolism in Chinese rural population. *Science of The Total Environment* 859: 160364.
102. Lv Y, Tian H, Luo L, Liu S, Bai X, Zhao H, **Zhang K**, Lin S, Zhao S, Guo Z, Xiao Y, Yang J. 2023. Understanding and revealing the intrinsic impacts of the COVID-19 lockdown on air quality and public health in North China using machine learning. *Science of The Total Environment* 857: 159339.
101. He L, Liu C, Shan X, Zhang L, Zheng L, Yu Y, Tian X, Xue B, Zhang Y, Qin X, Wang C, **Zhang K***, Luo B*. 2023. Impact of high temperature on road injury mortality in a changing climate, 1990–2019: A global analysis. *Science of The Total Environment* 857: 159369.
100. Shi C, Lin X, Huang T, **Zhang K**, Liu Y, Tian T, Wang P, Chen S, Guo T, Li Z, Liang B, Qin P, Zhang W, Hao Y. 2023. The association between wind speed and the risk of injuries among preschool children: New insight from a sentinel-surveillance-based study. *Science of The Total Environment* 856: 159005.

99. Jiang N, Qi L, Wang B, Cao S, Wang L, Zou B, **Zhang K**, Qing N, Duan X. 2022. Traffic related activity pattern of Chinese adults: a nation-wide population based survey. *Journal of Exposure Science & Environmental Epidemiology*: doi.org/10.1038/s41370-022-00469-y.
98. Liu C, Luo B, Wang B, He L, Wu H, Hou L, **Zhang K**. 2022. Global spatiotemporal trends of cardiovascular diseases due to temperature in different climates and socio-demographic index regions from 1990 to 2019. *Environmental Science and Pollution Research*. <https://doi.org/10.1007/s11356-022-22407-z>
97. Zhang W, Deng X, Romeiko X, **Zhang K**, Sheridan SC, Brotzge J, Chang H, Stern EK, Guo Z, Dong G, Reliene R, Hao Y, Lin S. 2022. How neighborhood environment modified the effects of power outages on multiple health outcomes in New York state? *Hygiene and Environmental Health Advances* 4: 100039.
96. Nanda M, Sharma R, Mubarik S, Aashima A, **Zhang K**. 2022. Type-2 Diabetes Mellitus (T2DM): Spatial-temporal Patterns of Incidence, Mortality and Attributable Risk Factors from 1990 to 2019 among 21 World Regions. *Endocrine* 77(3):444-454.
95. Miao L, Tang S, Ren Y, Kwan MP, **Zhang K**. 2022. Estimation of daily ground-level PM2.5 concentrations over the Pearl River Delta using 1-km resolution MODIS AOD based on multi-feature BiLSTM. *Atmospheric Environment* 290: 119362
94. Li S, Wang G, Wang B, Cao S, **Zhang K**, Duan X, Wu W. 2022. Has the Risk of Outpatient Visits for Allergic Rhinitis, Related to Short-Term Exposure to Air Pollution, Changed over the Past Years in Beijing, China? *International Journal of Environmental Research and Public Health* 19(19): 12529.
93. Lei R, Wang Z, Wang X, Tian H, Wang B, Xue B, Xiao Y, Hu J*, **Zhang K***, Luo B*. 2022. Effects of long-term exposure to PM2.5 and chemical constituents on blood lipids in an essential hypertensive population: A multi-city study in China. *Ecotoxicology and Environmental Safety*. 242: 113867
92. Lee S, Ye X, Nam JW, **Zhang K**. 2022. The association between tree canopy cover over streets and elderly pedestrian falls: A health disparity study in urban areas. *Social Science & Medicine* 306: 115169.
91. Kim K, Zheng Y, Joyce BT, Jiang H, Greenland P, Jacobs DR, **Zhang K**, Liu L, Allen NB, Wilkins JT, Forrester SN, Lloyd-Jones DM, Hou L. 2022. Relative contributions of six lifestyle- and health-related exposures to epigenetic aging: the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Clinical Epigenetics* 14(1): 85.
90. Joyce B, Gao T, Koss K, Zheng Y, Cardenas A, Heiss J, Just A, **Zhang K**, van Horn L, Allen N, Greenland P, Cohen S, Gordon-Larsen P, Mitchell C, McLanahan S, Schneper L, Notterman D, Rifas-Shiman S, Oken E, Hivert M, Wright R, Baccarelli A, Lloyd-Jones D, Hou L. 2022. Impact of paternal education on epigenetic ageing in adolescence and mid-adulthood: a multi-cohort study in the USA and Mexico. *International Journal of Epidemiology* 51(3): 870-884
89. Hu M, **Zhang K**, Nguyen QC, Tasdizen T, Krusche KU. 2022. A Multistate Study on Housing Factors Influential to Heat-Related Illness in the United States. *International Journal of Environmental Research and Public Health* 2022 19(23): 15762
88. Guo Q, **Zhang K**, Wang B, Cao S, Xue T, Zhang Q, Tian H, Fu P, Zhang J, Duan X. 2022. Chemical constituents of ambient fine particulate matter and obesity among school-aged children: A representative national study in China. *Science of The Total Environment* 849:157742.
87. Emeny RT, **Zhang K**, Goodman D, Dev A, Lewinson T, Wolff K, Kerrigan CL, Kraft S. 2022. Inclusion of Social and Structural Determinants of Health to Advance Understanding of their Influence on the Biology of Chronic Disease. *Current Protocols* 2(10): e556.
86. Liu G, Moore K, Su W-C, Delclos GL, Gimeno Ruiz de Porras D, Yu B, Tian H, Luo B, Lin S, Lewis GT, Craft E, **Zhang K***. 2022. Chemical explosion, COVID-19, and environmental justice: Insights from low-cost air quality sensors. *Science of The Total Environment* 849: 157881
85. Lin S, Deng X, Zhang W, Ryan I, **Zhang K**, Oghaghare E, Bennett D, Shaw B. 2022. COVID-19 Symptoms and Deaths Among Healthcare Workers in the United States. *Emerging Infectious Diseases* 28(8): 1624–1632. PMCID: PMC9328912; PMID: 35798004
84. Wang B, Liu J, Lei R, Xue B, Li Y, Tian X, **Zhang K***, Luo B*. 2022. Cold exposure, gut microbiota, and

hypertension: A mechanistic study. *Science of The Total Environment*. 2022:155199.

83. Egbert J, Krenz J, Sampson PD, Jung J, Calkins M, **Zhang K**, Palmández P, Faestel P, Spector JT. 2022. Accuracy of an estimated core temperature algorithm for agricultural workers. *Archives of Environmental & Occupational Health*:1-10.
82. He L, Xue B, Wang B, Liu C, Gimeno D, Delclos GL, Hu M, Luo B*, **Zhang K***. 2022. Impact of high, low, and non-optimum temperatures on chronic kidney disease in a changing climate, 1990–2019: A global analysis. *Environ Res*. 212:113172.
81. Xue B, Wang B, Lei R, Li Y, Luo B*, Yang A*, **Zhang K***. 2022. Indoor solid fuel use and renal function among middle-aged and older adults: A national study in rural China. *Environ Res.*: 206:112588.
80. Miao L, Liu C, Yang X, Kwan M-P, **Zhang K**. 2022 Spatiotemporal heterogeneity analysis of air quality in the Yangtze River Delta, China. *Sustainable Cities and Society* 78:103603.
79. Luo L, Bai X, Liu S, Wu B, Liu W, Lv Y, Guo Z, Lin S, Zhao S, Hao Y, Hao J, **Zhang K**, Zheng A, Tian H. 2022. Fine particulate matter (PM_{2.5}/PM_{1.0}) in Beijing, China: Variations and chemical compositions as well as sources. *Journal of Environmental Sciences*. 121:187-98.
78. Huang X, Zhang R, Li X, Dadashova B, Zhu L, Zhang K, Li Y, Shen B. 2022. Health-Based Geographic Information Systems for Mapping and Risk Modeling of Infectious Diseases and COVID-19 to Support Spatial Decision-Making. *Adv Exp Med Biol* 1368:167-188. PMID: 35594025
77. Li H, Li M, Zhang S, Qian Z, Zhang Z, **Zhang K**, Wang C, Arnold LD, McMillin SE, Wu S, Tian F, Lin H. 2022. Interactive effects of cold spell and air pollution on outpatient visits for anxiety in three subtropical Chinese cities. *Science of The Total Environment* 817:152789.
76. Su W, Lee J, Xi J, **Zhang K**. 2022. Investigation of Mask Efficiency for Loose-fitting Masks against Ultrafine Particles and Effect on Airway Deposition Efficiency. *Aerosol and Air Quality Research* 22: 210228.
75. Liu S, Tian H, Luo L, Bai X, Zhu C, Lin S, Zhao S, **Zhang K**, Hao J, Guo Z, Lv Y. 2022. Health impacts and spatiotemporal variations of fine particulate and its typical toxic constituents in five urban agglomerations of China. *Science of The Total Environment* 806 (4): 151459.
74. Zhao H*, Shen J, Chang D, Ye Y, Wu X, Chow WH, **Zhang K***. 2021 Land Use Mix and Leukocyte Telomere Length in Mexican Americans. *Scientific Reports* 11(1): 19742
73. Liu S, Tian H, Bai X, Zhu C, Wu B, Luo L, Hao Y, Liu W, Lin S, Zhao S, Wang K, Liu K, Gao J, Zhang Q, **Zhang K**, Kan K, Liu Y, Hao J. 2021. Significant but Spatiotemporal-Heterogeneous Health Risks Caused by Airborne Exposure to Multiple Toxic Trace Elements in China. *Environmental Science & Technology* 55 (19): 12818-12830.
72. Lanza K, Alcazar M, Ehlers S, Durand C, **Zhang K**, Kohl H. 2021 *School Parks as a Community Health Resource: Use of Joint-Use Parks by Children before and during COVID-19 Pandemic*. *International Journal of Environmental Research and Public Health* 18: 9237.
71. Cianconi P, Hanife B, Grillo F, **Zhang K**, Janiri L. *Human Responses and Adaptation in a Changing Climate: A Framework Integrating Biological, Psychological and Behavioural Aspects*. *Life* 11, 895. <https://doi.org/10.3390/life11090895>.
70. Wang B, Wang S, Li L, Xu S, Li C, Li S, Wang J, He H, Niu J, **Zhang K**, Luo B. 2021. *The association between drought and outpatient visits for respiratory diseases in four northwest cities of China*. *Climatic Change* 167, 2: doi.org/10.1007/s10584-021-03152-7.
69. Liu C, Wang B, Liu S, Li S, **Zhang K**, Luo B, Yang A. 2021. *Type 2 diabetes attributable to PM_{2.5}: A global burden study from 1990 to 2019*. *Environment International* 156: 106725.
68. Xu X, Qin N, Qi L, Zou B, Cao S, **Zhang K**, Yang Z, Liu Y, Zhang Y, Duan X. 2021. *Development of season-dependent land use regression models to estimate BC and PM₁ exposure*. *Science of Total Environment* 793: 148540.
67. Fu S, Wang B, Zhou J, Xu X, Liu J, Ma Y, Li L, He X, Li S, Niu J, Luo B, **Zhang K**. 2021. *Meteorological*

factors, governmental responses and COVID-19: Evidence from four European countries. *Environmental Research* 194: 110596. PMID: 33307083

66. Luo L, Tian H, Tian H, Liu H, Bai X, Liu W, Liu S, Wu B, Lin S, Zhao S, Hao Y, Sun Y, Hao J, **Zhang K**. 2021. *Seasonal variations in the mass characteristics and optical properties of carbonaceous constituents of PM_{2.5} in six cities of North China*. *Environmental Pollution* 268: 115780.
65. Ma Y, Li S, Liu J, He X, Li L, Niu J, Luo B, **Zhang K**. 2021 *Impact of Absolute Humidity and Temperature on Eczema*. *Biomedical and Environmental Sciences* 34(1): 61-65. PMID: 33531108
64. Li Z, Xu T, **Zhang K**, Deng H, Boerwinkle E, Xiong M. 2020. *Causal Analysis of Health Interventions and Environments for Influencing the Spread of COVID-19 in the United States of America*. *Frontiers in Applied Mathematics and Statistics*: doi: 10.3389/fams.2020.611805.
63. He X, Zhou G, Ma Y, Li L, Fu S, Liu S, Liu C, He Y, Su Z, Liu J, Niu J, Zhu W, **Zhang K**, Luo B. 2020. *Winter vacation, indoor air pollution and respiratory health among rural college students: A case study in Gansu Province, China*. *Building and Environment*: doi.org/10.1016/j.buildenv.2020.107481
62. O'Lenick C, Baniassadi A, Michael R, Monaghan A, Boehnert J, Yu X, Hayden M, Wiedinmyer C, **Zhang K**, Crank P, Heusinger J, Hoel P, Sailor D, Wilhelmi O. 2020. *A case-crossover analysis of indoor heat exposure on mortality and hospitalizations among the elderly in Houston, Texas*. *Environmental Health Perspective* 128(12): 127007.
61. Wang B, Liu J, Li Y, Fu S, Xu X, Li L, Zhou J, Liu X, He X, Yan J, Shi Y, Niu J, Yang Y, Li Y, Luo B, **Zhang K**. 2020. *Airborne particulate matter, population mobility and COVID-19: a multi-city study in China*. *BMC Public Health*. 20:1585. doi: 10.1186/s12889-020-09669-3. PMID: 33307083
60. Zhao H*, Shen J, Leung E, Zhang X, Chow WH, **Zhang K***. 2020. *Leukocyte mitochondrial DNA copy number and built environment in Mexican Americans: a cross-sectional study*. *Scientific Reports* 10: 14988. PMID: 32917938 PMID: 33307083
59. Li Y, Bakos-Block C, Rammah A, Magal, R, Adekanye J, Esquenazi S, McDaniel MR, **Zhang K**, Symanski E, Perkison WB, 2020. *The Post Hurricane Harvey Respiratory Protection Training Program*. *Journal of Occupational and Environmental Medicine*. 62(10):842-846. PMID: 32769779
58. Li Z, **Zhang K**, Xu T, Deng HW, Boerwinkle E, Xiong M. 2020. *Evaluation of Various Health Interventions to Curb the Spread of COVID-19 in the United States of America*. *Epidemiology International Journal* 4(4): 000157.
57. Liu J, Zhou J, Yao J, Zhang X, Li L, Xu X, He X, Wang B, Fu S, Niu T, Yan J, Shi Y, Ren X, Niu J, Zhu W, Li S, Luo B*, **Zhang K***, 2020. *Impact of meteorological factors on the COVID-19 transmission: A multi-city study in China*. *Science of Total Environment* 726(15): 138513. PMID: 32304942 PMID: 33307083
56. Fang S, Hu Z, Xu T, Zhang K, Li S, Lee J, Xiong M. 2020. *Mass testing and containment of COVID-19*. *Journal of Emergency Medicine Trauma & Surgical Care* S1001.
55. Chido-Amajuoyi OG, Ozigbu C, **Zhang K**. 2020. *School proximity and census tract correlates of e-cigarette specialty retail outlets (vape shops) in Central Texas*. *Preventive Medicine Reports* 18: 101079. DOI:10.1016/j.pmedr.2020.101079. PMID: 32257777 PMID: 33307083
54. Yang Y, Li S, **Zhang K**, Xiang X, Li Z, Ahn S, Murphy J. 2020. *How the Daily Smartphone is Associated With Daily Travel, Physical Activity, and Self-Perceived Health: Evidence From 2017 National Household Travel Survey*. *Journal of Aging and Physical Activity*: 1-9. PMID: 32434149. DOI: 10.1123/japa.2019-0222.
53. Liu X, Bai X, Tian H, Wang K, Hua S, Liu H, Liu S, Wu B, Wu Y, Liu W, Luo L, Wang Y, Hao J, Lin S, Zhao S, **Zhang K**. 2020. *Fine particulate matter pollution in North China: Seasonal-spatial variations, source apportionment, sector and regional transport contributions*. *Environmental Research* 184 (2020): 109368. PMID: 32192990.
52. Wu Y, Lin S, Tian H, **Zhang K**, Wang Y, Sun B, Liu X, Liu K, Xue Y, Hao J, Liu H, Liu S, Shao P, Luo L, Bai X, Liu W, Wu B, Zhao S. 2020. *A quantitative assessment of atmospheric emissions and spatial distribution of trace elements from natural sources in China*. *Environmental Pollution* 259:113918. PMID: 32023794

DOI: doi.org/10.1016/j.envpol.2020.113918.

51. Zhang X, Zhao H, Chow WH, Bixby M, Durand C, Markham C, **Zhang K***. 2020. *Population-Based Study of Traffic-Related Air Pollution and Obesity in Mexican Americans*. Obesity 28(2): 412-420. DOI: doi.org/10.1002/oby.22697. PMID: 31797571.
50. Li Q, Qiao F, McCreight C, Mao A, **Zhang K**. 2020. *Impact of Weaving Segment Configuration Designs on Drivers' Acute Driving Stress: A Case Study on Houston Freeway Weaving Segments*. International Journal of Civil Engineering 18:641-653. DOI: 10.1007/s40999-020-00497-5.
49. Delclòs-Alió X, Marquet O, Vich G, Schipperijn J, **Zhang K**, Maciejewska M, Miralles-Guasch C. 2019. *Temperature and Rain Moderate the Effect of Neighborhood Walkability on Walking Time for Seniors in Barcelona*. International Journal of Environmental Research and Public Health. 17(1):14. DOI: 10.3390/ijerph17010014. PMID: 31861363 PMCID: PMC6981853.
48. Mantravadi S, **Zhang K**. 2019. *Quality of Nursing Home: Spatial Patterns in Southwestern United States*. Journal of Strategic Innovation and Sustainability 14(5): 62-75 DOI:doi.org/10.33423/jsis.v14i5.2522.
47. Nannini D, Joyce B, Zheng Y, Gao T, Liu L, Yoon G, Huan T, Ma J, Jacobs D, Wilkins J, Ren J, **Zhang K**, Khan S, Allen N, Horvath S, Lloyd-Jones D, Greenland P, Hou L. 2019. *Epigenetic age acceleration and metabolic syndrome in the Coronary Artery Risk Development in Young Adults Study*. Clinical Epigenetics 11, 160. PMID: 31730017 PMCID: PMC6858654 DOI:doi.org/10.1186/s13148-019-0767-1.
46. Brown P, **RELISH Consortium**, Zhou Y. 2019. *Large expert-curated database for benchmarking document similarity detection in biomedical literature search*. Database: The Journal of Biological Databases and Curation. 2019: baz085. DOI:10.1093/database/baz085.
45. Liu J, Ma Y, Wang Y, Li S, Liu S, He X, Li L, Guo L, Niu J, Luo B, **Zhang K**. 2019. *The Impact of Cold and Heat on Years of Life Lost in a Northwestern Chinese City with Temperate Continental Climate*. International Journal of Environmental Research and Public Health 16(19): 3529. PMID: 31547211 PMCID: PMC6801473.
44. Liu S, Zhu C, Tian H, Wang Y, **Zhang K**, Wu B, Liu X, Hao Y, Liu W, Bai X, Lin S, Wu Y, Shao P, Liu H. 2019. *Spatiotemporal variations of ambient concentrations of trace elements in a highly polluted region of China*. Journal of Geophysical Research: Atmospheres 124: 4186–4202 DOI: doi.org/10.1029/2018JD029562.
43. Liu H, Tian H, **Zhang K**, Liu S, Cheng K, Yin S, Liu Y, Liu X, Wu Y, Liu W, Bai X, Wang Y, Shao P, Luo L, Lin S, Chen J, Liu X. 2019. *Seasonal variation, formation mechanisms and potential sources of PM_{2.5} in two typical cities in the Central Plains Urban Agglomeration, China*. Science of the Total Environment 657: 657-670. PubMed PMID: 30677932.
42. Tong W, Li L, Zhou X, Hamilton A, **Zhang K**. 2019. *Deep learning PM_{2.5} concentrations with bidirectional LSTM RNN*. Air Quality, Atmosphere & Health 12(4):411-423. DOI: 10.1007/s11869-018-0647-4.
41. Chen T, Du X, Chan WY, **Zhang K***. 2019. *Impacts of cold weather on emergency hospital admission in Texas, 2004-2013*. Environmental Research 169: 139-146. PubMed PMID: 30453131.
40. Zhang X, Zhao H, Chow WH, Durand C, Markham C, **Zhang K***. 2019. *Associations between the built environment and body mass index in the Mexican American Mano A Mano cohort*. Science of the Total Environment 654: 456-462. PubMed PMID: 30447584.
39. GBD 2017 Risk Factor Collaborators. 2018. *Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet 392(10159): 1923-1994. PubMed PMID: 30496105; PubMed Central PMCID: PMC6227755.
38. GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. 2018. *Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet 392(10159): 1789-1858. PubMed PMID: 30496104; PubMed Central PMCID: PMC6227754.
37. GBD 2017 Causes of Death Collaborators. 2018. *Global, regional, and national age-sex-specific mortality*

for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*▲ 392(10159): 1736-1788. PubMed PMID: 30496103; PubMed Central PMCID: PMC6227606.

36. GBD 2017 Mortality Collaborators. 2018. *Global, regional, and national age-sex-specific mortality and life expectancy, 1950-2017: a systematic analysis for the Global Burden of Disease Study 2017*. *The Lancet*▲ 392(10159): 1684-1735. PubMed PMID: 30496102; PubMed Central PMCID: PMC6227504.
35. Nnoli N, Linder S, Smith M, Gretchen G, **Zhang K**. 2018. *The combined effect of ambient ozone exposure and toxic air releases on hospitalization for asthma among children in Harris County, Texas*. *International Journal of Environmental Health Research*, 28(4): 358-378. PubMed PMID: 29962221.
34. Zhang X, Chu Y, Wang Y, **Zhang K***. 2018. *Predicting daily PM_{2.5} concentrations in Texas using high-resolution satellite aerosol optical depth*. *Science of the Total Environment*▲ 631-632: 904-911. PubMed PMID: 29728001.
33. Acharya P, Boggess B, **Zhang K***. 2018. *Assessing heat stress and health among construction workers in a changing climate: A review*. *International Journal of Environmental Research and Public Health*▲ 15(2): 247. PubMed PMID: 29389908; PubMed Central PMCID: PMC5858316.
32. Durand C, **Zhang K**, Salvo D. 2017. *Weather is not significantly correlated with destination-specific transport-related physical activity among adults: A large-scale temporally matched analysis*. *Preventive Medicine*▲ 101:133-136. PubMed PMID: 28576399; PubMed Central PMCID: PMC5551438.
31. Zhang X, Craft E, **Zhang K***. 2017 *Characterizing Spatial Variability of Air Pollution from Vehicle Traffic around the Houston Ship Channel Area*. *Atmospheric Environment*▲ 161: 167–175. DOI: 10.1016/j.atmosenv.2017.04.032.
30. Chen T, Li X, Zhao J, **Zhang K***. 2017. *Impacts of cold weather on all-cause and cause-specific mortality in Texas, 1990-2011*. *Environmental Pollution*▲ 225: 244-251. PubMed PMID: 28390302.
29. Luong C, **Zhang K***. 2017. *An Assessment of Emissions Events Trends within the Greater Houston Area during 2003-2013*. *Air Quality, Atmosphere & Health*▲ 10(5): 543–554. DOI: 10.1007/s11869-016-0449-5
28. Danysh H, Mitchell L, **Zhang K**, Scheurer M, Lupo P. 2017. *Differences in environmental exposure assignment due to residential mobility among children with a central nervous system tumor: Texas, 1995-2009*. *Journal of Exposure Science And Environmental Epidemiology*▲ 27: 41–46. PubMed PMID: 26443468.
27. Liu S, Ganduglia C, Li X, Delclos G, Franzini L, **Zhang K***. 2016. *Short-term Associations of Fine Particulate Matter Components and Emergency Hospital Admissions among a Privately Insured Population in Greater Houston*. *Atmospheric Environment*▲ 147: 369-375. DOI: 10.1016/j.atmosenv.2016.10.021.
26. Hou L**, **Zhang K****, Luthin M, Baccarelli A**. 2016. *Public Health Impact and Economic Costs of Volkswagen's Lack of Compliance with the United States' Emission Standards*. *International Journal of Environmental Research and Public Health* 13(9): 891 (** equal contribution). PubMed PMID: 27618076; PubMed Central PMCID: PMC5036724.
25. Liu S, Ganduglia C, Li X, Delclos G, Franzini L, **Zhang K***. 2016. *Fine Particulate Matter Components and Emergency Department Visits among a Privately Insured Population in Greater Houston*. *Science of the Total Environment*▲ 566–567:521–527. PubMed PMID: 27235902.
24. Liu Z, **Zhang K**, Du X. 2016. *Risks of developing breast and colorectal cancer in association with incomes and geographic locations in Texas: a retrospective cohort study*. *BMC Cancer*▲ 16(1):294. PubMed PMID: 27118258; PubMed Central PMCID: PMC4847204.
23. Chien L, Guo Y, **Zhang K***. 2016. *Spatiotemporal analysis of heat and heat wave effects on elderly mortality in Texas, 2006-2011*. *Science of the Total Environment*▲ 562:845-851. PubMed PMID: 27110995.
22. **Zhang K***, Arauz R, Chen T, Cooper S. 2016. *Heat effects among migrant and seasonal farmworkers: A case study in Colorado*. *Occupational and Environmental Medicine*▲ 73(5):324-328. PubMed PMID: 26872487.

21. Danysh H, **Zhang K**, Mitchell L, Scheurer M, Lupo P. 2016. *Maternal residential proximity to major roadways at delivery and Childhood central nervous system tumors*. Environmental Research▲ 146:315-322. PubMed PMID: 26802618.
20. Xie Y, Wang Y, **Zhang K**, Dong W, Lv B, Bai Y. 2015. *Daily estimation of ground-level PM_{2.5} concentrations over Beijing using 3 km resolution MODIS AOD*, Environmental Science & Technology▲ 49(20): 12280-12288. PubMed PMID: 26310776.
19. Liu S, **Zhang K***. 2015. *Fine particulate matter components and mortality in Greater Houston: Did the risk reduce from 2000 to 2011?* Science of the Total Environment▲ 538:162-168. PubMed PMID: 26311577.
18. Yan F, Chu Y, **Zhang K**, Zhang F, Bhandari N, Ruan G, Dai Z, Liu Y, Zhang Z, Kan AT, Tomson MB. 2015. *Determination of adsorption isotherm parameters with correlated errors by measurement error models*. Chemical Engineering Journal▲ 281: 921-930. DOI: 10.1016/j.cej.2015.07.021.
17. Rivera-González L, Zhang Z, Sánchez B, **Zhang K**, Brines S, Brown D, Rojas-Bracho L, Osornio-Vargas A, Vadillo-Ortega F, O'Neill M. 2015. *An assessment of air pollutant exposure methods in Mexico City, Mexico..* Journal of the Air & Waste Management Association▲ 65(5): 581-591. PubMed PMID: 25947316; PubMed Central PMCID: PMC4670782.
16. Danysh H, Mitchell L, **Zhang K**, Scheurer M, Lupo P. 2015. *Traffic-related air pollution and the incidence of childhood central nervous system tumors: Texas, 2001-2009*. Pediatric Blood & Cancer▲ 62(9):1572-8. PubMed PMID: 25962758.
15. **Zhang K***, Chen T, Begley C. 2015. *Impact of the 2011 heat wave on mortality and emergency department visits in Houston, Texas*, Environmental Health▲ 14:11. PubMed PMID: 25627975; PubMed Central PMCID: PMC4417210.
14. Zhou W, Ji S, Chen T, Hou Y, **Zhang K***. 2014. *The 2011 heat wave in Greater Houston: Effects of land use on temperature*, Environmental Research▲ 135: 81–87. PubMed PMID: 25262079.
13. **Zhang K***, Li Y, Schwartz J, O'Neill M. 2014. *What weather variables are important in predicting heat-related mortality? A new application of statistical learning methods*, Environmental Research▲ 132: 350-359. PubMed PMID: 24834832; PubMed Central PMCID: PMC4091921.
12. **Zhang K***, Chen Y, Schwartz J, Rood R, O'Neill M. 2014. *Using forecast and observed weather data to assess performance of forecast products in identifying heat waves and estimating heat wave effects on mortality*, Environ Health Perspect▲ 122(9): 912-918. PubMed PMID: 24833618; PubMed Central PMCID: PMC4154209.
11. **Zhang K***, Larson T, Gassett A, Szpiro A, Daviglius M, Burke G, Kaufman J, Adar S. 2014. *Characterizing spatial patterns of airborne coarse particulate (PM_{10-2.5}) mass and chemical components in three cities: The Multi-Ethnic Study of Atherosclerosis*, Environ Health Perspect▲ 122(8): 823-830. PubMed PMID: 24642481; PubMed Central PMCID: PMC4123025.
10. White-Newsome J, Brines S, Brown D, Dvonch JT, Gronlund C, **Zhang K**, Oswald E, O'Neill M. 2013. *Validating satellite-derived land surface temperature with in-situ measurements: a public health perspective*, Environ Health Perspect▲ 121(8):925-31. PubMed PMID: 23777856; PubMed Central PMCID: PMC3734495.
9. **Zhang K**, Batterman S. 2013. *Air pollution and health risks due to vehicle traffic*, Science of the Total Environment▲ 450-451: 307-316. PMID: 23500830; PubMed Central PMCID: PMC4243514.
8. **Zhang K***, Rood R, Michailidis G, Oswald E, Schwartz J, Zanobetti A, Ebi K, O'Neill M. 2012. *Comparing exposure metrics for classifying 'dangerous heat' in heat wave and health warning systems*, Environment International▲ 46(1): 23-29. PubMed PMID: 22673187; PubMed Central PMCID: PMC3401591.
7. Oswald E, Rood R, **Zhang K**, Gronlund C, O'Neill M, White-Newsome J, Brines S, Brown D. 2012. *An investigation into the spatial variability of near-surface air temperatures in the Detroit, MI metropolitan region*, Journal of Applied Meteorology and Climatology▲, 51(7): 1290-1304. DOI:10.1175/JAMC-D-11-0127.1

6. **Zhang K***, Oswald E, Brown D, Brines S, Gronlund C, White-Newsome J, Rood R, O'Neill M. 2011. *Geostatistical exploration of spatial variation of summertime temperatures in the Detroit metropolitan region*, Environmental Research▲ 111(8): 1046-1053. PubMed PMID: 21924413; PubMed Central PMCID: PMC4345124.
5. **Zhang K**, Batterman S, Dion F. 2011. *Vehicle emissions in congestion: comparison of work zone, rush hour and free-flow conditions*, Atmospheric Environment▲ 45(11):1929-1939. DOI: 10.1016/j.atmosenv.2011.01.030.
4. Batterman S, **Zhang K**, Kononowech R. 2010. *Prediction and analysis of near-road concentrations using a reduced-form emission/dispersion model*, Environmental Health▲ 9-29. PubMed PMID: 20579353; PubMed Central PMCID: PMC2914002.
3. **Zhang K**, Batterman S. 2010. *Near-road air pollutant concentrations of CO and PM_{2.5}: A comparison of MOBILE6.2/CALINE4 and generalized additive models*. Atmospheric Environment▲ 44:1740-1748. DOI: 10.1016/j.atmosenv.2010.02.008
2. **Zhang K**, Batterman S. 2009. *Time allocation shifts and pollutant exposure due to traffic congestion: An analysis using the national human activity pattern survey*, Science of The Total Environment▲ 407:5493-5500. PubMed PMID: 19683333.
1. Stevanovic A, Stevanovic J, **Zhang K**, Batterman S. 2009. *Optimizing traffic control to reduce fuel consumption and vehicular emissions: Integrated approach of VISSIM, CMEM, and VISGAOST*. Transportation Research Record. 2009; 2128(1):105-113