Bo Zheng

List of Publications by Year
in descending order

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127 papers	19,023 citations	26610 56 h-index	14736 127 g-index
204 all docs	204 docs citations	204 times ranked	13998 citing authors

#	Article	IF	Citations
1	Trends in China's anthropogenic emissions since 2010 as the consequence of clean air actions. Atmospheric Chemistry and Physics, 2018, 18, 14095-14111.	1.9	1,613
2	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	3.7	1,199
3	Drivers of improved PM _{2.5} air quality in China from 2013 to 2017. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24463-24469.	3.3	1,193
4	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	3.7	1,167
5	MIX: a mosaic Asian anthropogenic emission inventory under the international collaboration framework of the MICS-Asia and HTAP. Atmospheric Chemistry and Physics, 2017, 17, 935-963.	1.9	1,069
6	Exploring the severe winter haze in Beijing: the impact of synoptic weather, regional transport and heterogeneous reactions. Atmospheric Chemistry and Physics, 2015, 15, 2969-2983.	1.9	843
7	Reactive nitrogen chemistry in aerosol water as a source of sulfate during haze events in China. Science Advances, 2016, 2, e1601530.	4.7	820
8	Transboundary health impacts of transported global air pollution and international trade. Nature, 2017, 543, 705-709.	13.7	737
9	Anthropogenic emission inventories in China: a review. National Science Review, 2017, 4, 834-866.	4.6	580
10	Enhanced secondary pollution offset reduction of primary emissions during COVID-19 lockdown in China. National Science Review, 2021, 8, nwaa137.	4.6	493
11	Heterogeneous chemistry: a mechanism missing in current models to explain secondary inorganic aerosol formation during the January 2013 haze episode in North China. Atmospheric Chemistry and Physics, 2015, 15, 2031-2049.	1.9	481
12	Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic. Nature Communications, 2020, 11, 5172.	5.8	420
13	High-resolution inventory of technologies, activities, and emissions of coal-fired power plants in China from 1990 to 2010. Atmospheric Chemistry and Physics, 2015, 15, 13299-13317.	1.9	319
14	City-level climate change mitigation in China. Science Advances, 2018, 4, eaaq0390.	4.7	287
15	Persistent growth of anthropogenic non-methane volatile organic compound (NMVOC) emissions in China during 1990â€“2017: drivers, speciation and ozone formation potential. Atmospheric Chemistry and Physics, 2019, 19, 8897-8913.	1.9	267
16	Fossil Fuel Combustion-Related Emissions Dominate Atmospheric Ammonia Sources during Severe Haze Episodes: Evidence from ¹⁵N-Stable Isotope in Size-Resolved Aerosol Ammonium. Environmental Science & Technology, 2016, 50, 8049-8056.	4.6	261
17	Exploring 2016â€“2017 surface ozone pollution over China: source contributions and meteorological influences. Atmospheric Chemistry and Physics, 2019, 19, 8339-8361.	1.9	244
18	Targeted emission reductions from global super-polluting power plant units. Nature Sustainability, 2018, 1, 59-68.	11.5	215

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19	A global anthropogenic emission inventory of atmospheric pollutants from sector- and fuel-specific sources (1970â€“2017): an application of the Community Emissions Data System (CEDS). Earth System Science Data, 2020, 12, 3413-3442.	3.7	209
20	Abrupt decline in tropospheric nitrogen dioxide over China after the outbreak of COVID-19. Science Advances, 2020, 6, eabc2992.	4.7	208
21	Recent reduction in NO _x emissions over China: synthesis of satellite observations and emission inventories. Environmental Research Letters, 2016, 11, 114002.	2.2	207
22	Spatiotemporal continuous estimates of PM2.5 concentrations in China, 2000â€“2016: A machine learning method with inputs from satellites, chemical transport model, and ground observations. Environment International, 2019, 123, 345-357.	4.8	207
23	Tracking Air Pollution in China: Near Real-Time PM_{2.5} Retrievals from Multisource Data Fusion. Environmental Science & Technology, 2021, 55, 12106-12115.	4.6	205
24	Drivers of PM2.5 air pollution deaths in China 2002â€“2017. Nature Geoscience, 2021, 14, 645-650.	5.4	197
25	High-resolution mapping of vehicle emissions in China in 2008. Atmospheric Chemistry and Physics, 2014, 14, 9787-9805.	1.9	195
26	Global energy growth is outpacing decarbonization. Environmental Research Letters, 2018, 13, 120401.	2.2	188
27	Changes in China's anthropogenic emissions and air quality during the COVID-19 pandemic in 2020. Earth System Science Data, 2021, 13, 2895-2907.	3.7	176
28	Wintertime aerosol chemistry and haze evolution in an extremely polluted city of the North China Plain: significant contribution fromÂcoal and biomass combustion. Atmospheric Chemistry and Physics, 2017, 17, 4751-4768.	1.9	172
29	Rapid transition in winter aerosol composition in Beijing from 2014 to 2017: response to clean air actions. Atmospheric Chemistry and Physics, 2019, 19, 11485-11499.	1.9	167
30	Source contributions of urban PM2.5 in the Beijingâ€“Tianjinâ€“Hebei region: Changes between 2006 and 2013 and relative impacts of emissions and meteorology. Atmospheric Environment, 2015, 123, 229-239.	1.9	152
31	NO_{<i>x</i>} emission trends over Chinese cities estimated from OMI observations during 2005 to 2015. Atmospheric Chemistry and Physics, 2017, 17, 9261-9275.	1.9	146
32	Nitrate-driven urban haze pollution during summertime over the North China Plain. Atmospheric Chemistry and Physics, 2018, 18, 5293-5306.	1.9	143
33	Source contributions and regional transport of primary particulate matter in China. Environmental Pollution, 2015, 207, 31-42.	3.7	142
34	Pathways of China's PM2.5 air quality 2015â€“2060 in the context of carbon neutrality. National Science Review, 2021, 8, nwab078.	4.6	142
35	A high-resolution air pollutants emission inventory in 2013 for the Beijing-Tianjin-Hebei region, China. Atmospheric Environment, 2017, 170, 156-168.	1.9	138
36	Ozone pollution in the North China Plain spreading into the late-winter haze season. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	138

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37	Satellite-based estimates of decline and rebound in Chinaâ€™s CO ₂ emissions during COVID-19 pandemic. Science Advances, 2020, 6, .	4.7	136
38	Dynamic projection of anthropogenic emissions in China: methodology and 2015â€“2050 emission pathways under a range of socio-economic, climate policy, and pollution control scenarios. Atmospheric Chemistry and Physics, 2020, 20, 5729-5757.	1.9	117
39	Carbon Monitor, a near-real-time daily dataset of global CO2 emission from fossil fuel and cement production. Scientific Data, 2020, 7, 392.	2.4	115
40	Inequality of household consumption and air pollution-related deaths in China. Nature Communications, 2019, 10, 4337.	5.8	114
41	The underappreciated role of agricultural soil nitrogen oxide emissions in ozone pollution regulation in North China. Nature Communications, 2021, 12, 5021.	5.8	98
42	Global atmospheric carbon monoxide budget 2000â€“2017 inferred from multi-species atmospheric inversions. Earth System Science Data, 2019, 11, 1411-1436.	3.7	96
43	Rapid decline in carbon monoxide emissions and export from East Asia between years 2005 and 2016. Environmental Research Letters, 2018, 13, 044007.	2.2	95
44	How will greenhouse gas emissions from motor vehicles be constrained in China around 2030?. Applied Energy, 2015, 156, 230-240.	5.1	93
45	Modeling vehicle emissions in different types of Chinese cities: Importance of vehicle fleet and local features. Environmental Pollution, 2011, 159, 2954-2960.	3.7	88
46	Resolution dependence of uncertainties in gridded emission inventories: a case study in Hebei, China. Atmospheric Chemistry and Physics, 2017, 17, 921-933.	1.9	88
47	Integrating mitigation of air pollutants and greenhouse gases in Chinese cities: development of GAINS-City model for Beijing. Journal of Cleaner Production, 2013, 58, 25-33.	4.6	79
48	Air quality and health benefits of Chinaâ€™s emission control policies on coal-fired power plants during 2005â€“2020. Environmental Research Letters, 2019, 14, 094016.	2.2	73
49	Increasing forest fire emissions despite the decline in global burned area. Science Advances, 2021, 7, eabh2646.	4.7	71
50	To what extent can Chinaâ€™s near-term air pollution control policy protect air quality and human health? A case study of the Pearl River Delta region. Environmental Research Letters, 2015, 10, 104006.	2.2	67
51	The 2005â€“2016 Trends of Formaldehyde Columns Over China Observed by Satellites: Increasing Anthropogenic Emissions of Volatile Organic Compounds and Decreasing Agricultural Fire Emissions. Geophysical Research Letters, 2019, 46, 4468-4475.	1.5	66
52	Variations of China's emission estimates: response to uncertainties in energy statistics. Atmospheric Chemistry and Physics, 2017, 17, 1227-1239.	1.9	65
53	Effects of atmospheric transport and trade on air pollution mortality in China. Atmospheric Chemistry and Physics, 2017, 17, 10367-10381.	1.9	64
54	Mapping anthropogenic emissions in China at 1Âkm spatial resolution and its application in air quality modeling. Science Bulletin, 2021, 66, 612-620.	4.3	64

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55	Observing carbon dioxide emissions over China's cities and industrial areas with the Orbiting Carbon Observatory-2. Atmospheric Chemistry and Physics, 2020, 20, 8501-8510.	1.9	64
56	Impact of spatial proxies on the representation of bottom-up emission inventories: A satellite-based analysis. Atmospheric Chemistry and Physics, 2017, 17, 4131-4145.	1.9	61
57	Application of Weather Research and Forecasting Model with Chemistry (WRF/Chem) over northern China: Sensitivity study, comparative evaluation, and policy implications. Atmospheric Environment, 2016, 124, 337-350.	1.9	60
58	Natural gas shortages during the â€œcoal-to-gasâ€•transition in China have caused a large redistribution of air pollution in winter 2017. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31018-31025.	3.3	56
59	Regional trends and drivers of the global methane budget. Global Change Biology, 2022, 28, 182-200.	4.2	56
60	Fusing Observational, Satellite Remote Sensing and Air Quality Model Simulated Data to Estimate Spatiotemporal Variations of PM2.5 Exposure in China. Remote Sensing, 2017, 9, 221.	1.8	55
61	Intercomparison of Magnitudes and Trends in Anthropogenic Surface Emissions From Bottomâ€Up Inventories, Topâ€Down Estimates, and Emission Scenarios. Earth's Future, 2020, 8, e2020EF001520.	2.4	54
62	Inter-model comparison of global hydroxyl radical (OH) distributions and their impact on atmospheric methane over the 2000â€“2016 period. Atmospheric Chemistry and Physics, 2019, 19, 13701-13723.	1.9	52
63	Comparison and evaluation of anthropogenic emissions of SO₂ and NO_{<i>x</i>} over China. Atmospheric Chemistry and Physics, 2018, 18, 3433-3456.	1.9	51
64	Decadal changes in anthropogenic source contribution of PM_{2.5} pollution and related health impacts in China, 1990â€“2015. Atmospheric Chemistry and Physics, 2020, 20, 7783-7799.	1.9	49
65	Development of database of real-world diesel vehicle emission factors for China. Journal of Environmental Sciences, 2015, 31, 209-220.	3.2	48
66	China's emission control strategies have suppressed unfavorable influences of climate on wintertime PM_{2.5} concentrations in Beijing since 2002. Atmospheric Chemistry and Physics, 2020, 20, 1497-1505.	1.9	47
67	Global patterns of daily CO2 emissions reductions in the first year of COVID-19. Nature Geoscience, 2022, 15, 615-620.	5.4	46
68	Spatiotemporal variability of NO₂ and PM_{2.5} over Eastern China: observational and model analyses with a novel statistical method. Atmospheric Chemistry and Physics, 2018, 18, 12933-12952.	1.9	42
69	Emissions rebound from the COVID-19 pandemic. Nature Climate Change, 2022, 12, 412-414.	8.1	41
70	A striking growth of CO₂ emissions from the global cement industry driven by new facilities in emerging countries. Environmental Research Letters, 2022, 17, 044007.	2.2	37
71	Direct observations of CO2 emission reductions due to COVID-19 lockdown across European urban districts. Science of the Total Environment, 2022, 830, 154662.	3.9	37
72	Vehicular air pollutant emissions in China: evaluation of past control policies and future perspectives. Mitigation and Adaptation Strategies for Global Change, 2015, 20, 719-733.	1.0	36

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73	Evaluating China's fossil-fuel CO₂ emissions from a comprehensive dataset of nine inventories. Atmospheric Chemistry and Physics, 2020, 20, 11371-11385.	1.9	36
74	The â€œParade Blueâ€• effects of short-term emission control on aerosol chemistry. Faraday Discussions, 2016, 189, 317-335.	1.6	35
75	Unprecedented decline in summertime surface ozone over eastern China in 2020 comparably attributable to anthropogenic emission reductions and meteorology. Environmental Research Letters, 2021, 16, 124069.	2.2	35
76	Definitions and methods to estimate regional land carbon fluxes for the second phase of the REgional Carbon Cycle Assessment and Processes Project (RECCAP-2). Geoscientific Model Development, 2022, 15, 1289-1316.	1.3	34
77	Strong biomass burning contribution to ambient aerosol during heating season in a megacity in Northeast China: Effectiveness of agricultural fire bans?. Science of the Total Environment, 2021, 754, 142144.	3.9	33
78	Local Anomalies in the Columnâ€Averaged Dry Air Mole Fractions of Carbon Dioxide Across the Globe During the First Months of the Coronavirus Recession. Geophysical Research Letters, 2020, 47, e2020GL090244.	1.5	31
79	Infrastructure Shapes Differences in the Carbon Intensities of Chinese Cities. Environmental Science & Technology, 2018, 52, 6032-6041.	4.6	30
80	Decline in bulk deposition of air pollutants in China lags behind reductions in emissions. Nature Geoscience, 2022, 15, 190-195.	5.4	27
81	On the Role of the Flaming to Smoldering Transition in the Seasonal Cycle of African Fire Emissions. Geophysical Research Letters, 2018, 45, 11,998.	1.5	25
82	Accelerated reduction of air pollutants in China, 2017-2020. Science of the Total Environment, 2022, 803, 150011.	3.9	24
83	Near-real-time global gridded daily CO2 emissions. Innovation(China), 2022, 3, 100182.	5.2	24
84	Source apportionment of fine organic carbon at an urban site of Beijing using a chemical mass balance model. Atmospheric Chemistry and Physics, 2021, 21, 7321-7341.	1.9	23
85	Accelerating methane growth rate from 2010 to 2017: leading contributions from the tropics and East Asia. Atmospheric Chemistry and Physics, 2021, 21, 12631-12647.	1.9	23
86	Large CO₂ Emitters as Seen From Satellite: Comparison to a Gridded Global Emission Inventory. Geophysical Research Letters, 2022, 49, .	1.5	23
87	A city-level comparison of fossil-fuel and industry processes-induced CO2 emissions over the Beijing-Tianjin-Hebei region from eight emission inventories. Carbon Balance and Management, 2020, 15, 25.	1.4	22
88	Biofuel burning and human respiration bias on satellite estimates of fossil fuel CO₂ emissions. Environmental Research Letters, 2020, 15, 074036.	2.2	22
89	Adaptive CO2 emissions mitigation strategies of global oil refineries in all age groups. One Earth, 2021, 4, 1114-1126.	3.6	22
90	Mapping the drivers of formaldehyde (HCHO) variability from 2015 to 2019 over eastern China: insights from Fourier transform infrared observation and GEOS-Chem model simulation. Atmospheric Chemistry and Physics, 2021, 21, 6365-6387.	1.9	20

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91	Province-level fossil fuel CO2 emission estimates for China based on seven inventories. Journal of Cleaner Production, 2020, 277, 123377.	4.6	19
92	Influences of hydroxyl radicals (OH) on top-down estimates of the global and regional methane budgets. Atmospheric Chemistry and Physics, 2020, 20, 9525-9546.	1.9	19
93	A global map of emission clumps for future monitoring of fossil fuel CO₂ emissions from space. Earth System Science Data, 2019, 11, 687-703.	3.7	19
94	Multi-year application of WRF-CAM5 over East Asia-Part I: Comprehensive evaluation and formation regimes of O3 and PM2.5. Atmospheric Environment, 2017, 165, 122-142.	1.9	18
95	On the role of trend and variability in the hydroxyl radical (OH) in the global methane budget. Atmospheric Chemistry and Physics, 2020, 20, 13011-13022.	1.9	18
96	New seasonal pattern of pollution emerges from changing North American wildfires. Nature Communications, 2022, 13, 2043.	5.8	18
97	Modeling the aging process of black carbon during atmospheric transport using a new approach: a case study in Beijing. Atmospheric Chemistry and Physics, 2019, 19, 9663-9680.	1.9	17
98	PMIF v1.0: assessing the potential of satellite observations to constrain CO₂ emissions from large cities and point sources over the globe using synthetic data. Geoscientific Model Development, 2020, 13, 5813-5831.	1.3	16
99	Model vs. observation discrepancy in aerosol characteristics during a half-year long campaign in Northeast China: The role of biomass burning. Environmental Pollution, 2021, 269, 116167.	3.7	15
100	Comparison of Current and Future PM_{2.5} Air Quality in China Under CMIP6 and DPEC Emission Scenarios. Geophysical Research Letters, 2021, 48, e2021GL093197.	1.5	15
101	Climate change mitigation in Chinese megacities: A measures-based analysis of opportunities in the residential sector. Applied Energy, 2016, 184, 769-778.	5.1	14
102	Sensitivity to the sources of uncertainties in the modeling of atmospheric CO₂ concentration within and in the vicinity of Paris. Atmospheric Chemistry and Physics, 2021, 21, 10707-10726.	1.9	14
103	Decadal Variabilities in Tropospheric Nitrogen Oxides Over United States, Europe, and China. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035872.	1.2	14
104	Reply to Comment on â€œFossil Fuel Combustion-Related Emissions Dominate Atmospheric Ammonia Sources during Severe Haze Episodes: Evidence from ¹⁵N-Stable Isotope in Size-Resolved Aerosol Ammoniumâ€• Environmental Science & Technology, 2016, 50, 10767-10768.	4.6	13
105	Air quality and health benefits of Chinaâ€™s current and upcoming clean air policies. Faraday Discussions, 2021, 226, 584-606.	1.6	13
106	Corrigendum to Anthropogenic emission inventories in China: a review. National Science Review, 2018, 5, 603-603.	4.6	12
107	The reduction in C₂H₆ from 2015 to 2020 over Hefei, eastern China, points to air quality improvement in China. Atmospheric Chemistry and Physics, 2021, 21, 11759-11779.	1.9	12
108	The drivers and health risks of unexpected surface ozone enhancements over the Sichuan Basin, China, in 2020. Atmospheric Chemistry and Physics, 2021, 21, 18589-18608.	1.9	12

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109	Fine-scale application of WRF-CAM5 during a dust storm episode over East Asia: Sensitivity to grid resolutions and aerosol activation parameterizations. Atmospheric Environment, 2018, 176, 1-20.	1.9	10
110	Integration of field observation and air quality modeling to characterize Beijing aerosol in different seasons. Chemosphere, 2020, 242, 125195.	4.2	10
111	Quantifying variability, source, and transport of CO in the urban areas over the Himalayas and Tibetan Plateau. Atmospheric Chemistry and Physics, 2021, 21, 9201-9222.	1.9	10
112	Recent ozone trends in the Chinese free troposphere: role of the local emission reductions and meteorology. Atmospheric Chemistry and Physics, 2021, 21, 16001-16025.	1.9	10
113	The potential of a constellation of low earth orbit satellite imagers to monitor worldwide fossil fuel CO2 emissions from large cities and point sources. Carbon Balance and Management, 2020, 15, 18.	1.4	9
114	Improved spatial representation of a highly resolved emission inventory in China: evidence from TROPOMI measurements. Environmental Research Letters, 2021, 16, 084056.	2.2	9
115	Impacts of emission changes in China from 2010 to 2017 on domestic and intercontinental air quality and health effect. Atmospheric Chemistry and Physics, 2021, 21, 16051-16065.	1.9	9
116	New Insights into Unexpected Severe PM_{2.5} Pollution during the SARS and COVID-19 Pandemic Periods in Beijing. Environmental Science & Technology, 2022, 56, 155-164.	4.6	9
117	Rapid narrowing of the urbanâ€“suburban gap in air pollutant concentrations in Beijing from 2014 to 2019. Environmental Pollution, 2022, 304, 119146.	3.7	8
118	Differential impacts of urbanization characteristics on city-level carbon emissions from passenger transport on road: Evidence from 360 cities in China. Building and Environment, 2022, 219, 109165.	3.0	8
119	Retrospect driving forces and forecasting reduction potentials of energy-related industrial carbon emissions from Chinaâ€™s manufacturing at city level. Environmental Research Letters, 2020, 15, 074020.	2.2	6
120	Consumption-based PM2.5-related premature mortality in the Beijing-Tianjin-Hebei region. Science of the Total Environment, 2021, 800, 149575.	3.9	6
121	Anthropogenic Emissions of SO2, NOx, and NH3 in China. , 2020, , 13-40.		6
122	Evaluation of a multi-scale WRF-CAM5 simulation during the 2010 East Asian Summer Monsoon. Atmospheric Environment, 2017, 169, 204-217.	1.9	4
123	Evaporation process dominates vehicular NMVOC emissions in China with enlarged contribution from 1990 to 2016. Environmental Research Letters, 2021, 16, 124036.	2.2	4
124	A local- to national-scale inverse modeling system to assess the potential of spaceborne CO₂ measurements for the monitoring of anthropogenic emissions. Atmospheric Measurement Techniques, 2021, 14, 403-433.	1.2	3
125	Annual Maps of Forests in Australia from Analyses of Microwave and Optical Images with FAO Forest Definition. Journal of Remote Sensing, 2021, 2021, .	3.2	3
126	Rapid decline in atmospheric organic carbon deposition in rural Beijing, North China between 2016 and 2020. Atmospheric Environment, 2022, 276, 119030.	1.9	3

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127	Risk assessment of mortality from acute exposure to ambient fine particles based on the different toxicities of chemical compositions in China. Journal of Integrative Environmental Sciences, 2021, 18, 55-66.	1.0	2