Guannan Geng

List of Publications by Year
in descending order

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80 papers	9,717 citations	57758 44 h-index	62596 80 g-index
103 all docs	103 docs citations	103 times ranked	6554 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.	4.9	1,613
2	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.	7.1	1,193
3	Transboundary health impacts of transported global air pollution and international trade. Nature, 2017, 543, 705-709.	27.8	737
4	Anthropogenic emission inventories in China: a review. National Science Review, 2017, 4, 834-866.	9.5	580
5	Full-coverage high-resolution daily PM2.5 estimation using MAIAC AOD in the Yangtze River Delta of China. Remote Sensing of Environment, 2017, 199, 437-446.	11.0	239
6	Targeted emission reductions from global super-polluting power plant units. Nature Sustainability, 2018, 1, 59-68.	23.7	215
7	An Ensemble Machine-Learning Model To Predict Historical PM_{2.5} Concentrations in China from Satellite Data. Environmental Science & Technology, 2018, 52, 13260-13269.	10.0	215
8	Estimating long-term PM2.5 concentrations in China using satellite-based aerosol optical depth and a chemical transport model. Remote Sensing of Environment, 2015, 166, 262-270.	11.0	214
9	Air quality improvements and health benefits from Chinaâ€™s clean air action since 2013. Environmental Research Letters, 2017, 12, 114020.	5.2	213
10	Tracking Air Pollution in China: Near Real-Time PM_{2.5} Retrievals from Multisource Data Fusion. Environmental Science & Technology, 2021, 55, 12106-12115.	10.0	205
11	Drivers of PM2.5 air pollution deaths in China 2002â€“2017. Nature Geoscience, 2021, 14, 645-650.	12.9	197
12	Changes in China's anthropogenic emissions and air quality during the COVID-19 pandemic in 2020. Earth System Science Data, 2021, 13, 2895-2907.	9.9	176
13	Estimating ground-level PM2.5 concentrations over three megalopolises in China using satellite-derived aerosol optical depth measurements. Atmospheric Environment, 2016, 124, 232-242.	4.1	163
14	Predicting monthly high-resolution PM2.5 concentrations with random forest model in the North China Plain. Environmental Pollution, 2018, 242, 675-683.	7.5	146
15	Rapid improvement of PM2.5 pollution and associated health benefits in China during 2013â€“2017. Science China Earth Sciences, 2019, 62, 1847-1856.	5.2	146
16	Pathways of China's PM2.5 air quality 2015â€“2060 in the context of carbon neutrality. National Science Review, 2021, 8, nwab078.	9.5	142
17	Satellite-based estimates of decline and rebound in Chinaâ€™s CO ₂ emissions during COVID-19 pandemic. Science Advances, 2020, 6, .	10.3	136
18	Economic footprint of California wildfires in 2018. Nature Sustainability, 2021, 4, 252-260.	23.7	131

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19	Air pollution characteristics and their relationship with emissions and meteorology in the Yangtze River Delta region during 2014â€“2016. Journal of Environmental Sciences, 2019, 83, 8-20.	6.1	123
20	Current Emissions and Future Mitigation Pathways of Coal-Fired Power Plants in China from 2010 to 2030. Environmental Science & Technology, 2018, 52, 12905-12914.	10.0	122
21	Estimating Spatiotemporal Variation in Ambient Ozone Exposure during 2013â€“2017 Using a Data-Fusion Model. Environmental Science & Technology, 2020, 54, 14877-14888.	10.0	118
22	Changes in spatial patterns of PM2.5 pollution in China 2000â€“2018: Impact of clean air policies. Environment International, 2020, 141, 105776.	10.0	118
23	Chemical composition of ambient PM_{2.â€‰5} over China and relationship to precursor emissions during 2005â€“2012. Atmospheric Chemistry and Physics, 2017, 17, 9187-9203.	4.9	117
24	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.	4.9	117
25	Inequality of household consumption and air pollution-related deaths in China. Nature Communications, 2019, 10, 4337.	12.8	114
26	Satellite remote sensing of changes in NO x emissions over China during 1996â€“2010. Science Bulletin, 2012, 57, 2857-2864.	1.7	113
27	Tracking PM_{2.5} and O₃ Pollution and the Related Health Burden in China 2013â€“2020. Environmental Science & Technology, 2022, 56, 6922-6932.	10.0	113
28	Impact of Chinaâ€™s Air Pollution Prevention and Control Action Plan on PM2.5 chemical composition over eastern China. Science China Earth Sciences, 2019, 62, 1872-1884.	5.2	105
29	Separating emission and meteorological contributions to long-term PM_{2.5} trends over eastern China during 2000â€“2018. Atmospheric Chemistry and Physics, 2021, 21, 9475-9496.	4.9	99
30	Associations of wildfire smoke PM2.5 exposure with cardiorespiratory events in Colorado 2011â€“2014. Environment International, 2019, 133, 105151.	10.0	94
31	Revealing the Hidden Health Costs Embodied in Chinese Exports. Environmental Science & Technology, 2015, 49, 4381-4388.	10.0	88
32	Resolution dependence of uncertainties in gridded emission inventories: a case study in Hebei, China. Atmospheric Chemistry and Physics, 2017, 17, 921-933.	4.9	88
33	Global climate forcing of aerosols embodied in international trade. Nature Geoscience, 2016, 9, 790-794.	12.9	79
34	Evaluation of gap-filling approaches in satellite-based daily PM2.5 prediction models. Atmospheric Environment, 2021, 244, 117921.	4.1	71
35	Development of PM2.5 and NO2 models in a LUR framework incorporating satellite remote sensing and air quality model data in Pearl River Delta region, China. Environmental Pollution, 2017, 226, 143-153.	7.5	70
36	Effects of atmospheric transport and trade on air pollution mortality in China. Atmospheric Chemistry and Physics, 2017, 17, 10367-10381.	4.9	64

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37	Mapping anthropogenic emissions in China at 1Âkm spatial resolution and its application in air quality modeling. Science Bulletin, 2021, 66, 612-620.	9.0	64
38	Estimating ground-level PM_{2.5} in eastern China using aerosol optical depth determined from the GOCI satellite instrument. Atmospheric Chemistry and Physics, 2015, 15, 13133-13144.	4.9	61
39	Impact of spatial proxies on the representation of bottom-up emission inventories: A satellite-based analysis. Atmospheric Chemistry and Physics, 2017, 17, 4131-4145.	4.9	61
40	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.	4.0	55
41	Impact of clean air action on PM2.5 pollution in China. Science China Earth Sciences, 2019, 62, 1845-1846.	5.2	55
42	Enhancement of PM_{2.5} Concentrations by Aerosolâ€Meteorology Interactions Over China. Journal of Geophysical Research D: Atmospheres, 2018, 123, 1179-1194.	3.3	51
43	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.	4.9	49
44	Health co-benefits of climate change mitigation depend on strategic power plant retirements and pollution controls. Nature Climate Change, 2021, 11, 1077-1083.	18.8	49
45	Attribution of PM2.5 exposure in Beijingâ€“Tianjinâ€“Hebei region to emissions: implication to control strategies. Science Bulletin, 2017, 62, 957-964.	9.0	46
46	Association between pregnancy loss and ambient PM2Â·5 using survey data in Africa: a longitudinal case-control study, 1998â€“2016. Lancet Planetary Health, The, 2019, 3, e219-ee225.	11.4	46
47	Energy and emission pathways towards PM2.5 air quality attainment in the Beijing-Tianjin-Hebei region by 2030. Science of the Total Environment, 2019, 692, 361-370.	8.0	45
48	Estimation of pregnancy losses attributable to exposure to ambient fine particles in south Asia: an epidemiological case-control study. Lancet Planetary Health, The, 2021, 5, e15-e24.	11.4	44
49	Contribution of hydroxymethanesulfonate (HMS) to severe winter haze in the North China Plain. Atmospheric Chemistry and Physics, 2020, 20, 5887-5897.	4.9	40
50	Random forest models for PM_{2.5} speciation concentrations using MISR fractional AODs. Environmental Research Letters, 2020, 15, 034056.	5.2	37
51	Satelliteâ€Based Daily PM_{2.5} Estimates During Fire Seasons in Colorado. Journal of Geophysical Research D: Atmospheres, 2018, 123, 8159-8171.	3.3	36
52	Evaluating the spatiotemporal ozone characteristics with high-resolution predictions in mainland China, 2013â€“2019. Environmental Pollution, 2022, 299, 118865.	7.5	33
53	Estimating daily PM2.5 concentrations in New York City at the neighborhood-scale: Implications for integrating non-regulatory measurements. Science of the Total Environment, 2019, 697, 134094.	8.0	31
54	Open fire exposure increases the risk of pregnancy loss in South Asia. Nature Communications, 2021, 12, 3205.	12.8	31

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55	Long-term PM2.5 exposure and depressive symptoms in China: A quasi-experimental study. The Lancet Regional Health - Western Pacific, 2021, 6, 100079.	2.9	31
56	Satellite-based estimation of hourly PM2.5 levels during heavy winter pollution episodes in the Yangtze River Delta, China. Chemosphere, 2020, 239, 124678.	8.2	28
57	The sensitivity of satellite-based PM2.5 estimates to its inputs: Implications to model development in data-poor regions. Environment International, 2018, 121, 550-560.	10.0	26
58	Associations between exposure to landscape fire smoke and child mortality in low-income and middle-income countries: a matched case-control study. Lancet Planetary Health, The, 2021, 5, e588-e598.	11.4	25
59	Clean air actions in China, PM2.5 exposure, and household medical expenditures: A quasi-experimental study. PLoS Medicine, 2021, 18, e1003480.	8.4	22
60	Reduction in black carbon light absorption due to multi-pollutant emission control during APEC China 2014. Atmospheric Chemistry and Physics, 2018, 18, 10275-10287.	4.9	20
61	Exposure to landscape fire smoke reduced birthweight in low- and middle-income countries: findings from a siblings-matched case-control study. ELife, 2021, 10, .	6.0	19
62	Satellite-based assessment of the long-term efficacy of PM2.5 pollution control policies across the Taiwan Strait. Remote Sensing of Environment, 2020, 251, 112067.	11.0	18
63	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.	4.9	17
64	Improved air quality in China can enhance solar-power performance and accelerate carbon-neutrality targets. One Earth, 2022, 5, 550-562.	6.8	17
65	Association between a Rapid Reduction in Air Particle Pollution and Improved Lung Function in Adults. Annals of the American Thoracic Society, 2021, 18, 247-256.	3.2	16
66	Comparison of Current and Future PM_{2.5} Air Quality in China Under CMIP6 and DPEC Emission Scenarios. Geophysical Research Letters, 2021, 48, e2021GL093197.	4.0	15
67	Dramatic changes in Harbin aerosol during 2018â€“2020: the roles of open burning policy and secondary aerosol formation. Atmospheric Chemistry and Physics, 2021, 21, 15199-15211.	4.9	15
68	Air quality and health benefits of Chinaâ€™s current and upcoming clean air policies. Faraday Discussions, 2021, 226, 584-606.	3.2	13
69	Reduction of Global Life Expectancy Driven by Trade-Related Transboundary Air Pollution. Environmental Science and Technology Letters, 2022, 9, 212-218.	8.7	13
70	New WHO global air quality guidelines help prevent premature deaths in China. National Science Review, 2022, 9, nwac055.	9.5	13
71	Corrigendum to Anthropogenic emission inventories in China: a review. National Science Review, 2018, 5, 603-603.	9.5	12
72	Imbalanced transfer of trade-related air pollution mortality in China. Environmental Research Letters, 2020, 15, 094009.	5.2	11

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73	Application of Bayesian Additive Regression Trees for Estimating Daily Concentrations of PM2.5 Components. Atmosphere, 2020, 11, 1233.	2.3	10
74	Formation of secondary inorganic aerosol in a frigid urban atmosphere. Frontiers of Environmental Science and Engineering, 2021, 16, 1.	6.0	10
75	Improved spatial representation of a highly resolved emission inventory in China: evidence from TROPOMI measurements. Environmental Research Letters, 2021, 16, 084056.	5.2	9
76	A Satellite-Based Land Use Regression Model of Ambient NO2 with High Spatial Resolution in a Chinese City. Remote Sensing, 2021, 13, 397.	4.0	6
77	Consumption-based PM2.5-related premature mortality in the Beijing-Tianjin-Hebei region. Science of the Total Environment, 2021, 800, 149575.	8.0	6
78	Evaporation process dominates vehicular NMVOC emissions in China with enlarged contribution from 1990 to 2016. Environmental Research Letters, 2021, 16, 124036.	5.2	4
79	Daily Emission Patterns of Coal-Fired Power Plants in China Based on Multisource Data Fusion. ACS Environmental Au, 2022, 2, 363-372.	7.0	4
80	Satellite-derived long-term estimates of full-coverage PM1 concentrations across China based on a stacking decision tree model. Atmospheric Environment, 2021, 255, 118448.	4.1	3