Guiqian Tang

List of Publications by Year
in descending order

125 papers	6,876 citations	61984 43 h-index	66911 78 g-index
137 all docs	137 docs citations	137 times ranked	4995 citing authors

#	Article	IF	Citations
1	Mechanism for the formation of the January 2013 heavy haze pollution episode over central and eastern China. Science China Earth Sciences, 2014, 57, 14-25.	5.2	626
2	Mineral dust and NOx promote the conversion of SO2 to sulfate in heavy pollution days. Scientific Reports, 2014, 4, 4172.	3.3	426
3	Mixing layer height and its implications for air pollution over Beijing, China. Atmospheric Chemistry and Physics, 2016, 16, 2459-2475.	4.9	335
4	Contrasting trends of PM2.5 and surface-ozone concentrations in China from 2013 to 2017. National Science Review, 2020, 7, 1331-1339.	9.5	284
5	Wet and dry deposition of atmospheric nitrogen at ten sites in Northern China. Atmospheric Chemistry and Physics, 2012, 12, 6515-6535.	4.9	230
6	The heaviest particulate air-pollution episodes occurred in northern China in January, 2013: Insights gained from observation. Atmospheric Environment, 2014, 92, 546-556.	4.1	212
7	Surface ozone trend details and interpretations in Beijing, 2001â€“2006. Atmospheric Chemistry and Physics, 2009, 9, 8813-8823.	4.9	192
8	Spatial-temporal variations in surface ozone in Northern China as observed during 2009â€“2010 and possible implications for future air quality control strategies. Atmospheric Chemistry and Physics, 2012, 12, 2757-2776.	4.9	178
9	Chemical characterization and source identification of PM_{2.5} at multiple sites in the Beijingâ€“Tianjinâ€“Hebei region, China. Atmospheric Chemistry and Physics, 2017, 17, 12941-12962.	4.9	178
10	VOC characteristics, emissions and contributions to SOA formation during hazy episodes. Atmospheric Environment, 2016, 141, 560-570.	4.1	161
11	Impact of emission controls on air quality in Beijing during APEC 2014: lidar ceilometer observations. Atmospheric Chemistry and Physics, 2015, 15, 12667-12680.	4.9	159
12	Analysis of heavy pollution episodes in selected cities of northern China. Atmospheric Environment, 2012, 50, 338-348.	4.1	152
13	Characteristics, source apportionment and reactivity of ambient volatile organic compounds at Dinghu Mountain in Guangdong Province, China. Science of the Total Environment, 2016, 548-549, 347-359.	8.0	125
14	The vertical distribution of PM2.5 and boundary-layer structure during summer haze in Beijing. Atmospheric Environment, 2013, 74, 413-421.	4.1	116
15	The Campaign on Atmospheric Aerosol Research Network of China: CARE-China. Bulletin of the American Meteorological Society, 2015, 96, 1137-1155.	3.3	115
16	Trends in particulate matter and its chemical compositions in China from 2013â€“2017. Science China Earth Sciences, 2019, 62, 1857-1871.	5.2	111
17	Haze insights and mitigation in China: An overview. Journal of Environmental Sciences, 2014, 26, 2-12.	6.1	91
18	Redefining the importance of nitrate during haze pollution to help optimize an emission control strategy. Atmospheric Environment, 2016, 141, 197-202.	4.1	90

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19	Study on dissolved organic carbon in precipitation in Northern China. Atmospheric Environment, 2010, 44, 2350-2357.	4.1	88
20	Characteristics of chemical composition and seasonal variations of PM2.5 in Shijiazhuang, China: Impact of primary emissions and secondary formation. Science of the Total Environment, 2019, 677, 215-229.	8.0	84
21	Mixing layer height on the North China Plain and meteorological evidence of serious air pollution in southern Hebei. Atmospheric Chemistry and Physics, 2018, 18, 4897-4910.	4.9	78
22	Modelling study of boundary-layer ozone over northern China - Part I: Ozone budget in summer. Atmospheric Research, 2017, 187, 128-137.	4.1	76
23	Vertical characterization of aerosol optical properties and brown carbon in winter in urban Beijing, China. Atmospheric Chemistry and Physics, 2019, 19, 165-179.	4.9	73
24	The Stove, Dome, and Umbrella Effects of Atmospheric Aerosol on the Development of the Planetary Boundary Layer in Hazy Regions. Geophysical Research Letters, 2020, 47, e2020GL087373.	4.0	73
25	Variability and reduction of atmospheric pollutants in Beijing and its surrounding area during the Beijing 2008 Olympic Games. Science Bulletin, 2010, 55, 1937-1944.	1.7	70
26	Ozone weekend effects in the Beijingâ€“Tianjinâ€“Hebei metropolitan area, China. Atmospheric Chemistry and Physics, 2014, 14, 2419-2429.	4.9	70
27	Nitrate-dominated PM_{2.5} and elevation of particle pH observed in urban Beijing during the winter of 2017. Atmospheric Chemistry and Physics, 2020, 20, 5019-5033.	4.9	70
28	Regional pollution and its formation mechanism over North China Plain: A case study with ceilometer observations and model simulations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 14,574.	3.3	69
29	Mortality and air pollution in Beijing: The long-term relationship. Atmospheric Environment, 2017, 150, 238-243.	4.1	69
30	Vertically resolved characteristics of air pollution during two severe winter haze episodes in urban Beijing, China. Atmospheric Chemistry and Physics, 2018, 18, 2495-2509.	4.9	69
31	Spatial distribution and temporal variations of atmospheric sulfur deposition in Northern China: insights into the potential acidification risks. Atmospheric Chemistry and Physics, 2013, 13, 1675-1688.	4.9	66
32	Evaluation of tropospheric SO₂ retrieved from MAX-DOAS measurements in Xianghe, China. Atmospheric Chemistry and Physics, 2014, 14, 11149-11164.	4.9	64
33	Meteorological mechanism for a large-scale persistent severe ozone pollution event over eastern China in 2017. Journal of Environmental Sciences, 2020, 92, 187-199.	6.1	63
34	Characteristics of PM2.5 pollution in Beijing after the improvement of air quality. Journal of Environmental Sciences, 2021, 100, 1-10.	6.1	59
35	Different HONO Sources for Three Layers at the Urban Area of Beijing. Environmental Science & Technology, 2020, 54, 12870-12880.	10.0	52
36	Evolution of boundary layer ozone in Shijiazhuang, a suburban site on the North China Plain. Journal of Environmental Sciences, 2019, 83, 152-160.	6.1	50

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37	Inversion of CO emissions over Beijing and its surrounding areas with ensemble Kalman filter. Atmospheric Environment, 2013, 81, 676-686.	4.1	49
38	Water-soluble ions in PM2.5 during spring haze and dust periods in Chengdu, China: Variations, nitrate formation and potential source areas. Environmental Pollution, 2018, 243, 1740-1749.	7.5	49
39	Reductions of PM2.5 in Beijing-Tianjin-Hebei urban agglomerations during the 2008 Olympic Games. Advances in Atmospheric Sciences, 2012, 29, 1330-1342.	4.3	48
40	Two-year continuous measurements of carbonaceous aerosols in urban Beijing, China: Temporal variations, characteristics and source analyses. Chemosphere, 2018, 200, 191-200.	8.2	48
41	The observationâ€based relationships between PM_{2.5} and AOD over China. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10,701.	3.3	47
42	Spatial oscillation of the particle pollution in eastern China during winter: Implications for regional air quality and climate. Atmospheric Environment, 2016, 144, 100-110.	4.1	46
43	Bypassing the NOx titration trap in ozone pollution control in Beijing. Atmospheric Research, 2021, 249, 105333.	4.1	46
44	Quantification of the impact of aerosol on broadband solar radiation in North China. Scientific Reports, 2017, 7, 44851.	3.3	45
45	Characteristics of ozone and its precursors in Northern China: A comparative study of three sites. Atmospheric Research, 2013, 132-133, 450-459.	4.1	44
46	Vertical characteristics of VOCs in the lower troposphere over the North China Plain during pollution periods. Environmental Pollution, 2018, 236, 907-915.	7.5	43
47	Significant changes in autumn and winter aerosol composition and sources in Beijing from 2012 to 2018: Effects of clean air actions. Environmental Pollution, 2021, 268, 115855.	7.5	43
48	Vehicular emissions in China in 2006 and 2010. Journal of Environmental Sciences, 2016, 48, 179-192.	6.1	41
49	Evaluation and uncertainty investigation of the NO₂, CO and NH₃ modeling over China under the framework of MICS-AsiaÂIII. Atmospheric Chemistry and Physics, 2020, 20, 181-202.	4.9	41
50	Detailed budget analysis of HONO in Beijing, China: Implication on atmosphere oxidation capacity in polluted megacity. Atmospheric Environment, 2021, 244, 117957.	4.1	39
51	Source apportionment of PM2.5 and visibility in Jinan, China. Journal of Environmental Sciences, 2021, 102, 207-215.	6.1	38
52	Rapid formation of intense haze episodes via aerosolâ€"boundary layer feedback in Beijing. Atmospheric Chemistry and Physics, 2020, 20, 45-53.	4.9	36
53	Assessment of the impacts of aromatic VOC emissions and yields of SOA on SOA concentrations with the air quality model RAMS-CMAQ. Atmospheric Environment, 2017, 158, 105-115.	4.1	35
54	Insight into the formation and evolution of secondary organic aerosol in the megacity of Beijing, China. Atmospheric Environment, 2020, 220, 117070.	4.1	34

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55	Aggravated ozone pollution in the strong free convection boundary layer. Science of the Total Environment, 2021, 788, 147740.	8.0	33
56	Vertically decreased VOC concentration and reactivity in the planetary boundary layer in winter over the North China Plain. Atmospheric Research, 2020, 240, 104930.	4.1	32
57	Haze pollution under a high atmospheric oxidization capacity in summer in Beijing: insights into formation mechanism of atmospheric physicochemical processes. Atmospheric Chemistry and Physics, 2020, 20, 4575-4592.	4.9	31
58	Analysis of a long-term measurement of air pollutants (2007â€“2011) in North China Plain (NCP); Impact of emission reduction during the Beijing Olympic Games. Chemosphere, 2016, 159, 647-658.	8.2	30
59	How do aerosols above the residual layer affect the planetary boundary layer height?. Science of the Total Environment, 2022, 814, 151953.	8.0	30
60	Thermal internal boundary layer and its effects on air pollutants during summer in a coastal city in North China. Journal of Environmental Sciences, 2018, 70, 37-44.	6.1	29
61	Mixing layer transport flux of particulate matter in Beijing, China. Atmospheric Chemistry and Physics, 2019, 19, 9531-9540.	4.9	29
62	Investigating the evolution of summertime secondary atmospheric pollutants in urban Beijing. Science of the Total Environment, 2016, 572, 289-300.	8.0	28
63	The impact threshold of the aerosol radiative forcing on the boundary layer structure in the pollution region. Atmospheric Chemistry and Physics, 2021, 21, 5739-5753.	4.9	27
64	Elucidating the quantitative characterization of atmospheric oxidation capacity in Beijing, China. Science of the Total Environment, 2021, 771, 145306.	8.0	27
65	Characterization of submicron particles during autumn in Beijing, China. Journal of Environmental Sciences, 2018, 63, 16-27.	6.1	26
66	Exploring the inorganic and organic nitrate aerosol formation regimes at a suburban site on the North China Plain. Science of the Total Environment, 2021, 768, 144538.	8.0	26
67	Organic composition of gasoline and its potential effects on air pollution in North China. Science China Chemistry, 2015, 58, 1416-1425.	8.2	25
68	The PM2.5 threshold for aerosol extinction in the Beijing megacity. Atmospheric Environment, 2017, 167, 458-465.	4.1	25
69	A 3D study on the amplification of regional haze and particle growth by local emissions. Npj Climate and Atmospheric Science, 2021, 4, .	6.8	23
70	Impact of residual layer transport on air pollution in Beijing, China. Environmental Pollution, 2021, 271, 116325.	7.5	21
71	Atmospheric ammonia and its effect on PM2.5 pollution in urban Chengdu, Sichuan Basin, China. Environmental Pollution, 2021, 291, 118195.	7.5	21
72	Different roles of nitrate and sulfate in air pollution episodes in the North China Plain. Atmospheric Environment, 2020, 224, 117325.	4.1	20

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73	Vertically increased NO3 radical in the nocturnal boundary layer. Science of the Total Environment, 2021, 763, 142969.	8.0	20
74	Significant contribution of spring northwest transport to volatile organic compounds in Beijing. Journal of Environmental Sciences, 2021, 104, 169-181.	6.1	20
75	Highly time-resolved chemical characterization and implications of regional transport for submicron aerosols in the North China Plain. Science of the Total Environment, 2020, 705, 135803.	8.0	18
76	The interaction between urbanization and aerosols during a typical winter haze event in Beijing. Atmospheric Chemistry and Physics, 2020, 20, 9855-9870.	4.9	18
77	Unexpected Increases of Severe Haze Pollution During the Post COVIDâ€19 Period: Effects of Emissions, Meteorology, and Secondary Production. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	18
78	Low particulate nitrate in the residual layer in autumn over the North China Plain. Science of the Total Environment, 2021, 782, 146845.	8.0	17
79	Evaluating the Effects of Springtime Dust Storms over Beijing and the Associated Characteristics of Sub-Micron Aerosol. Aerosol and Air Quality Research, 2017, 17, 680-692.	2.1	17
80	The spatial representativeness of mixing layer height observations in the North China Plain. Atmospheric Research, 2018, 209, 204-211.	4.1	16
81	Vertical Characterization of Aerosol Particle Composition in Beijing, China: Insights From 3â€Month Measurements With Two Aerosol Mass Spectrometers. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13,016.	3.3	16
82	Effectively controlling hazardous airborne elements: Insights from continuous hourly observations during the seasons with the most unfavorable meteorological conditions after the implementation of the APPCAP. Journal of Hazardous Materials, 2020, 387, 121710.	12.4	16
83	Analysis of differences between thermodynamic and material boundary layer structure: Comparison of detection by ceilometer and microwave radiometer. Atmospheric Research, 2021, 248, 105179.	4.1	16
84	Vertical Distributions of Primary and Secondary Aerosols in Urban Boundary Layer: Insights into Sources, Chemistry, and Interaction with Meteorology. Environmental Science & Technology, 2021, 55, 4542-4552.	10.0	16
85	Boundary layer structure characteristics under objective classification of persistent pollution weather types in the Beijing area. Atmospheric Chemistry and Physics, 2021, 21, 8863-8882.	4.9	16
86	Secondary organic aerosols in Jinan, an urban site in North China: Significant anthropogenic contributions to heavy pollution. Journal of Environmental Sciences, 2019, 80, 107-115.	6.1	15
87	Modelling study of boundary-layer ozone over northern China - Part II: Responses to emission reductions during the Beijing Olympics. Atmospheric Research, 2017, 193, 83-93.	4.1	14
88	Evaluation and Evolution of MAX-DOAS-observed Vertical NO2 Profiles in Urban Beijing. Advances in Atmospheric Sciences, 2021, 38, 1188-1196.	4.3	14
89	The difference in the boundary layer height between urban and suburban areas in Beijing and its implications for air pollution. Atmospheric Environment, 2021, 260, 118552.	4.1	14
90	Annual nonmethane hydrocarbon trends in Beijing from 2000 to 2019. Journal of Environmental Sciences, 2022, 112, 210-217.	6.1	14

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91	Is Urban Greening an Effective Solution to Enhance Environmental Comfort and Improve Air Quality?. Environmental Science & Technology, 2022, 56, 5390-5397.	10.0	14
92	Vertical Evolution of Boundary Layer Volatile Organic Compounds in Summer over the North China Plain and the Differences with Winter. Advances in Atmospheric Sciences, 2021, 38, 1165-1176.	4.3	13
93	Simulated Sensitivity of Ozone Generation to Precursors in Beijing during a High O3 Episode. Advances in Atmospheric Sciences, 2021, 38, 1223-1237.	4.3	13
94	Decreased gaseous carbonyls in the North China plain from 2004 to 2017 and future control measures. Atmospheric Environment, 2019, 218, 117015.	4.1	12
95	High gaseous carbonyl concentrations in the upper boundary layer in Shijiazhuang, China. Science of the Total Environment, 2021, 799, 149438.	8.0	11
96	Decadal changes in ozone in the lower boundary layer over Beijing, China. Atmospheric Environment, 2022, 275, 119018.	4.1	11
97	Case study of the effects of aerosol chemical composition and hygroscopicity on the scattering coefficient in summer, Xianghe, southeast of Beijing, China. Atmospheric Research, 2019, 225, 81-87.	4.1	10
98	Distinction of two kinds of haze. Atmospheric Environment, 2020, 223, 117228.	4.1	10
99	Observation and modeling of vertical carbon dioxide distribution in a heavily polluted suburban environment. Atmospheric and Oceanic Science Letters, 2020, 13, 371-379.	1.3	10
100	The thermodynamic structures of the planetary boundary layer dominated by synoptic circulations and the regular effect on air pollution in Beijing. Atmospheric Chemistry and Physics, 2021, 21, 6111-6128.	4.9	10
101	Environmental effects of China's coal ban policy: Results from in situ observations and model analysis in a typical rural area of the Beijing-Tianjin-Hebei region, China. Atmospheric Research, 2022, 268, 106015.	4.1	10
102	Investigating missing sources of glyoxal over China using a regional air quality model (RAMS-CMAQ). Journal of Environmental Sciences, 2018, 71, 108-118.	6.1	9
103	Model analysis of vertical exchange of boundary layer ozone and its impact on surface air quality over the North China Plain. Science of the Total Environment, 2022, 821, 153436.	8.0	9
104	Oscillation cumulative volatile organic compounds on the northern edge of the North China Plain: Impact of mountain-plain breeze. Science of the Total Environment, 2022, 821, 153541.	8.0	9
105	The Levels and Sources of Nitrous Acid (HONO) in Winter of Beijing and Sanmenxia. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	9
106	Assessment of dicarbonyl contributions to secondary organic aerosols over China using RAMS-CMAQ. Atmospheric Chemistry and Physics, 2019, 19, 6481-6495.	4.9	8
107	ROx Budgets and O3 Formation during Summertime at Xianghe Suburban Site in the North China Plain. Advances in Atmospheric Sciences, 2021, 38, 1209-1222.	4.3	8
108	The dynamic multi-box algorithm of atmospheric environmental capacity. Science of the Total Environment, 2022, 806, 150951.	8.0	8

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109	Unexpected deep mixing layer in the Sichuan Basin, China. Atmospheric Research, 2021, 249, 105300.	4.1	7
110	Trends of Planetary Boundary Layer Height Over Urban Cities of China From 1980â€“2018. Frontiers in Environmental Science, 2021, 9, .	3.3	7
111	Vertical evolution of black and brown carbon during pollution events over North China Plain. Science of the Total Environment, 2022, 806, 150950.	8.0	6
112	Reduced volatility of aerosols from surface emissions to the top of the planetary boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 14749-14760.	4.9	6
113	Effect of Different Combustion Processes on Atmospheric Nitrous Acid Formation Mechanisms: A Winter Comparative Observation in Urban, Suburban and Rural Areas of the North China Plain. Environmental Science & Technology, 2022, 56, 4828-4837.	10.0	6
114	Vertically Resolved Aerosol Chemistry in the Low Boundary Layer of Beijing in Summer. Environmental Science & Technology, 2022, 56, 9312-9324.	10.0	6
115	A comprehensive evaluation of aerosol extinction apportionment in Beijing using a high-resolution time-of-flight aerosol mass spectrometer. Science of the Total Environment, 2021, 783, 146976.	8.0	5
116	Evaluation of a Method for Calculating the Height of the Stable Boundary Layer Based on Wind Profile Lidar and Turbulent Fluxes. Remote Sensing, 2021, 13, 3596.	4.0	5
117	Low-molecular-weight carbonyl volatile organic compounds on the North China Plain. Atmospheric Environment, 2022, 275, 119000.	4.1	5
118	Progress in quantitative research on the relationship between atmospheric oxidation and air quality. Journal of Environmental Sciences, 2023, 123, 350-366.	6.1	5
119	Effects of different stagnant meteorological conditions on aerosol chemistry and regional transport changes in Beijing, China. Atmospheric Environment, 2021, 258, 118483.	4.1	4
120	Multilevel air quality evolution in Shenyang: Impact of elevated point emission reduction. Journal of Environmental Sciences, 2022, 113, 300-310.	6.1	4
121	Submicron-scale aerosol above the city canopy in Beijing in spring based on in-situ meteorological tower measurements. Atmospheric Research, 2022, 271, 106128.	4.1	4
122	Influence of circulation types on temporal and spatial variations of ozone in Beijing. Journal of Environmental Sciences, 2023, 130, 37-51.	6.1	4
123	Evaluation of continuous ceilometer-based mixing layer heights and correlations with PM 2.5 concentrations in Beijing. Proceedings of SPIE, 2009, , .	0.8	3
124	Significant decline in aerosols in the mixing layer in Beijing from 2015 to 2020: Effects of regional coordinated air pollution control. Science of the Total Environment, 2022, 838, 156364.	8.0	3
125	Three-dimensional Thermal and Dynamic Structure in Synoptic and Local Scale and its Influence on Haze Formation during Autumn in Beijing. Aerosol and Air Quality Research, 2021, 21, 200593.	2.1	0