Biwu Chu

List of Publications by Year
in descending order

85 papers	3,550 citations	136885 32 h-index	149623 56 g-index
135 all docs	135 docs citations	135 times ranked	2894 citing authors

#	Article	IF	Citations
1	Atmospheric heterogeneous reactions on soot: A review. Fundamental Research, 2023, 3, 579-591.	1.6	7
2	Application of smog chambers in atmospheric process studies. National Science Review, 2022, 9, nwab103.	4.6	21
3	Molecular Composition of Oxygenated Organic Molecules and Their Contributions to Organic Aerosol in Beijing. Environmental Science & Technology, 2022, 56, 770-778.	4.6	16
4	Coordinated Control of Fine-Particle and Ozone Pollution by the Substantial Reduction of Nitrogen Oxides. Engineering, 2022, 15, 13-16.	3.2	5
5	Influence of organic aerosol molecular composition on particle absorptive properties in autumn Beijing. Atmospheric Chemistry and Physics, 2022, 22, 1251-1269.	1.9	8
6	A New Type of Quartz Smog Chamber: Design and Characterization. Environmental Science & Technology, 2022, 56, 2181-2190.	4.6	7
7	Highly oxidized organic aerosols in Beijing: Possible contribution of aqueous-phase chemistry. Atmospheric Environment, 2022, 273, 118971.	1.9	3
8	Development and Assessment of a High-Resolution Biogenic Emission Inventory from Urban Green Spaces in China. Environmental Science & Technology, 2022, 56, 175-184.	4.6	35
9	Survival of newly formed particles in haze conditions. Environmental Science Atmospheres, 2022, 2, 491-499.	0.9	8
10	Generation and Release of OH Radicals from the Reaction of H₂O with O₂ over Soot. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
11	Dramatic decrease of secondary organic aerosol formation potential in Beijing: Important contribution from reduction of coal combustion emission. Science of the Total Environment, 2022, 832, 155045.	3.9	7
12	Influence of Aerosol Chemical Composition on Condensation Sink Efficiency and New Particle Formation in Beijing. Environmental Science and Technology Letters, 2022, 9, 375-382.	3.9	6
13	Innentitelbild: Generation and Release of OH Radicals from the Reaction of H₂O with O₂ over Soot (Angew. Chem. 21/2022). Angewandte Chemie, 2022, 134, .	1.6	1
14	Significant concurrent decrease in PM2.5 and NO2 concentrations in China during COVID-19 epidemic. Journal of Environmental Sciences, 2021, 99, 346-353.	3.2	126
15	Is reducing new particle formation a plausible solution to mitigate particulate air pollution in Beijing and other Chinese megacities?. Faraday Discussions, 2021, 226, 334-347.	1.6	74
16	A 3D study on the amplification of regional haze and particle growth by local emissions. Npj Climate and Atmospheric Science, 2021, 4, .	2.6	23
17	Particle growth with photochemical age from new particle formation to haze in the winter of Beijing, China. Science of the Total Environment, 2021, 753, 142207.	3.9	21
18	Role of iodine oxoacids in atmospheric aerosol nucleation. Science, 2021, 371, 589-595.	6.0	94

#	Article	IF	Citations
19	Measurement report: Effects of photochemical aging on the formation and evolution of summertime secondary aerosol in Beijing. Atmospheric Chemistry and Physics, 2021, 21, 1341-1356.	1.9	18
20	Secondary Organic Aerosol Formation Potential from Ambient Air in Beijing: Effects of Atmospheric Oxidation Capacity at Different Pollution Levels. Environmental Science & Technology, 2021, 55, 4565-4572.	4.6	26
21	The Synergistic Role of Sulfuric Acid, Bases, and Oxidized Organics Governing Newâ€Particle Formation in Beijing. Geophysical Research Letters, 2021, 48, e2020GL091944.	1.5	53
22	Formation of nighttime sulfuric acid from the ozonolysis of alkenes in Beijing. Atmospheric Chemistry and Physics, 2021, 21, 5499-5511.	1.9	17
23	Increased primary and secondary H₂SO₄ showing the opposing roles in secondary organic aerosol formation from ethyl methacrylate ozonolysis. Atmospheric Chemistry and Physics, 2021, 21, 7099-7112.	1.9	1
24	Comprehensive Study about the Photolysis of Nitrates on Mineral Oxides. Environmental Science & Technology, 2021, 55, 8604-8612.	4.6	25
25	Effect of relative humidity on SOA formation from aromatic hydrocarbons: Implications from the evolution of gas- and particle-phase species. Science of the Total Environment, 2021, 773, 145015.	3.9	34
26	Atmospheric gaseous hydrochloric and hydrobromic acid in urban Beijing, China: detection, source identification and potential atmospheric impacts. Atmospheric Chemistry and Physics, 2021, 21, 11437-11452.	1.9	12
27	Mechanistic Study of the Aqueous Reaction of Organic Peroxides with HSO 3 âˆ’ on the Surface of a Water Droplet. Angewandte Chemie, 2021, 133, 20362-20365.	1.6	2
28	Rapid mass growth and enhanced light extinction of atmospheric aerosols during the heating season haze episodes in Beijing revealed by aerosolâ€“chemistryâ€“radiationâ€“boundary layer interaction. Atmospheric Chemistry and Physics, 2021, 21, 12173-12187.	1.9	10
29	Mechanistic Study of the Aqueous Reaction of Organic Peroxides with HSO₃^{âˆ’} on the Surface of a Water Droplet. Angewandte Chemie - International Edition, 2021, 60, 20200-20203.	7.2	9
30	Ammonium nitrate promotes sulfate formation through uptake kinetic regime. Atmospheric Chemistry and Physics, 2021, 21, 13269-13286.	1.9	24
31	Microkinetic study of NO oxidation, standard and fast NH3-SCR on CeWO at low temperatures. Chemical Engineering Journal, 2021, 423, 130128.	6.6	34
32	Improving the representation of HONO chemistry in CMAQ and examining its impact on haze over China. Atmospheric Chemistry and Physics, 2021, 21, 15809-15826.	1.9	21
33	Chemical composition of nanoparticles from <i>Î±</i>-pinene nucleation and the influence of isoprene and relative humidity at low temperature. Atmospheric Chemistry and Physics, 2021, 21, 17099-17114.	1.9	12
34	Measurement report: New particle formation characteristics at an urban and a mountain station in northern China. Atmospheric Chemistry and Physics, 2021, 21, 17885-17906.	1.9	7
35	Unprecedented Ambient Sulfur Trioxide (SO₃) Detection: Possible Formation Mechanism and Atmospheric Implications. Environmental Science and Technology Letters, 2020, 7, 809-818.	3.9	34
36	Air Pollutant Correlations in China: Secondary Air Pollutant Responses to NO_{<i>x</i>} and SO₂ Control. Environmental Science and Technology Letters, 2020, 7, 695-700.	3.9	113

#	Article	IF	Citations
37	Continuous and comprehensive atmospheric observations in Beijing: a station to understand the complex urban atmospheric environment. Big Earth Data, 2020, 4, 295-321.	2.0	54
38	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. Nature, 2020, 581, 184-189.	13.7	169
39	Contrasting trends of PM2.5 and surface-ozone concentrations in China from 2013 to 2017. National Science Review, 2020, 7, 1331-1339.	4.6	284
40	Seasonal Characteristics of New Particle Formation and Growth in Urban Beijing. Environmental Science & Technology, 2020, 54, 8547-8557.	4.6	78
41	Enhanced growth rate of atmospheric particles from sulfuric acid. Atmospheric Chemistry and Physics, 2020, 20, 7359-7372.	1.9	58
42	Variation of size-segregated particle number concentrations in wintertime Beijing. Atmospheric Chemistry and Physics, 2020, 20, 1201-1216.	1.9	52
43	Impacts of Mixed Gaseous and Particulate Pollutants on Secondary Particle Formation during Ozonolysis of Butyl Vinyl Ether. Environmental Science & Technology, 2020, 54, 3909-3919.	4.6	4
44	Formation and growth of sub-3-nm aerosol particles in experimental chambers. Nature Protocols, 2020, 15, 1013-1040.	5.5	49
45	Chemical characterization of submicron aerosol in summertime Beijing: A case study in southern suburbs in 2018. Chemosphere, 2020, 247, 125918.	4.2	17
46	Sources and sinks driving sulfuric acid concentrations in contrasting environments: implications on proxy calculations. Atmospheric Chemistry and Physics, 2020, 20, 11747-11766.	1.9	42
47	Size-segregated particle number and mass concentrations from different emission sources in urban Beijing. Atmospheric Chemistry and Physics, 2020, 20, 12721-12740.	1.9	36
48	The promotion effect of nitrous acid on aerosol formation in wintertime in Beijing: the possible contribution of traffic-related emissions. Atmospheric Chemistry and Physics, 2020, 20, 13023-13040.	1.9	37
49	Molecular understanding of new-particle formation from <i>Î±</i>-pinene between âˆ’50 and +25â€‰Â°C. Atmospheric Chemistry and Physics, 2020, 20, 9183-9207.	1.9	68
50	Variations and sources of nitrous acid (HONO) during a severe pollution episode in Beijing in winter 2016. Science of the Total Environment, 2019, 648, 253-262.	3.9	62
51	The effect of water on the heterogeneous reactions of SO₂ and NH₃ on the surfaces of Î±-Fe₂O₃ and Î³-Al₂O₃. Environmental Science: Nano, 2019, 6, 2749-2758.	2.2	30
52	Impacts of SO₂, Relative Humidity, and Seed Acidity on Secondary Organic Aerosol Formation in the Ozonolysis of Butyl Vinyl Ether. Environmental Science & Technology, 2019, 53, 8845-8853.	4.6	22
53	Contrary Role of H₂O and O₂ in the Kinetics of Heterogeneous Photochemical Reactions of SO₂ on TiO₂. Journal of Physical Chemistry A, 2019, 123, 1311-1318.	1.1	26
54	Important role of aromatic hydrocarbons in SOA formation from unburned gasoline vapor. Atmospheric Environment, 2019, 201, 101-109.	1.9	33

#	Article	IF	Citations
55	Significant source of secondary aerosol: formation from gasoline evaporative emissions in the presence of SO₂ and NH₃. Atmospheric Chemistry and Physics, 2019, 19, 8063-8081.	1.9	52
56	Enhancement of aqueous sulfate formation by the coexistence of NO2/NH3 under high ionic strengths in aerosol water. Environmental Pollution, 2019, 252, 236-244.	3.7	49
57	Parameterization of heterogeneous reaction of SO2 to sulfate on dust with coexistence of NH3 and NO2 under different humidity conditions. Atmospheric Environment, 2019, 208, 133-140.	1.9	37
58	Atmospheric new particle formation in China. Atmospheric Chemistry and Physics, 2019, 19, 115-138.	1.9	118
59	A proxy for atmospheric daytime gaseous sulfuric acid concentration in urban Beijing. Atmospheric Chemistry and Physics, 2019, 19, 1971-1983.	1.9	46
60	Effects of NO₂ and C₃H₆ on the heterogeneous oxidation of SO₂ on TiO₂ in the presence or absence of UVâ€“Vis irradiation. Atmospheric Chemistry and Physics, 2019, 19, 14777-14790.	1.9	21
61	A laboratory study on the hygroscopic behavior of H2C2O4-containing mixed particles. Atmospheric Environment, 2019, 200, 34-39.	1.9	7
62	Differences of the oxidation process and secondary organic aerosol formation at low and high precursor concentrations. Journal of Environmental Sciences, 2019, 79, 256-263.	3.2	29
63	NO promotion of SO2 conversion to sulfate: An important mechanism for the occurrence of heavy haze during winter in Beijing. Environmental Pollution, 2018, 233, 662-669.	3.7	82
64	Secondary Organic Aerosol Formation from Ambient Air at an Urban Site in Beijing: Effects of OH Exposure and Precursor Concentrations. Environmental Science & Technology, 2018, 52, 6834-6841.	4.6	42
65	Role of NH₃ in the Heterogeneous Formation of Secondary Inorganic Aerosols on Mineral Oxides. Journal of Physical Chemistry A, 2018, 122, 6311-6320.	1.1	25
66	Influence of metal-mediated aerosol-phase oxidation on secondary organic aerosol formation from the ozonolysis and OH-oxidation of Î±-pinene. Scientific Reports, 2017, 7, 40311.	1.6	15
67	Effects of seed particles Al2O3, Al2(SO4)3 and H2SO4 on secondary organic aerosol. Frontiers of Environmental Science and Engineering, 2017, 11, 1.	3.3	3
68	Heterogeneous Reactions between Toluene and NO₂ on Mineral Particles under Simulated Atmospheric Conditions. Environmental Science & Technology, 2017, 51, 9596-9604.	4.6	41
69	Ozonolysis of Trimethylamine Exchanged with Typical Ammonium Salts in the Particle Phase. Environmental Science & Technology, 2016, 50, 11076-11084.	4.6	18
70	Synergetic formation of secondary inorganic and organic aerosol: effect of SO₂ and NH₃ on particle formation and growth. Atmospheric Chemistry and Physics, 2016, 16, 14219-14230.	1.9	102
71	Exploring the nitrous acid (HONO) formation mechanism in winter Beijing: direct emissions and heterogeneous production in urban and suburban areas. Faraday Discussions, 2016, 189, 213-230.	1.6	77
72	Distinct potential aerosol masses under different scenarios of transport at a suburban site of Beijing. Journal of Environmental Sciences, 2016, 39, 52-61.	3.2	13

#	Article	IF	Citations
73	Role of ammonia in forming secondary aerosols from gasoline vehicle exhaust. Science China Chemistry, 2015, 58, 1377-1384.	4.2	35
74	Effect of aluminium dust on secondary organic aerosol formation in m-xylene/NO x photo-oxidation. Science China Earth Sciences, 2015, 58, 245-254.	2.3	8
75	Secondary aerosol formation and oxidation capacity in photooxidation in the presence of Al2O3 seed particles and SO2. Science China Chemistry, 2015, 58, 1426-1434.	4.2	14
76	Comparisons of measured nitrous acid (HONO) concentrations in a pollution period at urban and suburban Beijing, in autumn of 2014. Science China Chemistry, 2015, 58, 1393-1402.	4.2	41
77	Heterogeneous Kinetics of <i>cis</i>-Pinonic Acid with Hydroxyl Radical under Different Environmental Conditions. Journal of Physical Chemistry A, 2015, 119, 6583-6593.	1.1	22
78	Current progress towards the heterogeneous reactions on mineral dust and soot. Chinese Science Bulletin, 2015, 60, 122-136.	0.4	1
79	Hygroscopicity of particles generated from photooxidation of Î±-pinene under different oxidation conditions in the presence of sulfate seed aerosols. Journal of Environmental Sciences, 2014, 26, 129-139.	3.2	10
80	Mineral dust and NOx promote the conversion of SO2 to sulfate in heavy pollution days. Scientific Reports, 2014, 4, 4172.	1.6	426
81	Decreasing effect and mechanism of FeSO 4 seed particles on secondary organic aerosol in Î± -pinene photooxidation. Environmental Pollution, 2014, 193, 88-93.	3.7	27
82	Effect of mineral dust on secondary organic aerosol yield and aerosol size in Î±-pinene/NOx photo-oxidation. Atmospheric Environment, 2013, 77, 781-789.	1.9	35
83	Effects of two transition metal sulfate salts on secondary organic aerosol formation in toluene/NO x photooxidation. Frontiers of Environmental Science and Engineering, 2013, 7, 1-9.	3.3	21
84	The remarkable effect of FeSO4 seed aerosols on secondary organic aerosol formation from photooxidation of Î±-pinene/NOx and toluene/NOx. Atmospheric Environment, 2012, 55, 26-34.	1.9	32
85	Generation and Release of OH Radicals from the Reaction of H ₂ O with O ₂ over Soot. Angewandte Chemie, 0, , .	1.6	2