Lei Zhu

List of Publications by Year in Descending Order

49 papers	1,785 citations	20 h-index	42 g-index
65 ext. papers	2,268 ext. citations	7 avg, IF	4.18 L-index

#	Paper	IF	Citations
49	Role of Organic and Conservation Agriculture in Ammonia Emissions and Crop Productivity in China.. *Environmental Science & Technology*, **2022**,	10.3	1
48	Improved ozone simulation in East Asia via assimilating observations from the first geostationary air-quality monitoring satellite: Insights from an Observing System Simulation Experiment. *Atmospheric Environment*, **2022**, 274, 119003	5.3	0
47	Efficient Atmospheric Transport of Microplastics over Asia and Adjacent Oceans.. *Environmental Science & Technology*, **2022**, 56, 6243-6252	10.3	2
46	Source and variability of formaldehyde (HCHO) at northern high latitudes: an integrated satellite, aircraft, and model study. *Atmospheric Chemistry and Physics*, **2022**, 22, 7163-7178	6.8	1
45	Sensitivities of Ozone Air Pollution in the Beijing-Tianjin-Hebei Area to Local and Upwind Precursor Emissions Using Adjoint Modeling. *Environmental Science & Technology*, **2021**, 55, 5752-5762	10.3	10
44	Anthropogenic Impacts on Tropospheric Reactive Chlorine Since the Preindustrial. *Geophysical Research Letters*, **2021**, 48, e2021GL093808	4.9	2
43	Global Significant Changes in Formaldehyde (HCHO) Columns Observed From Space at the Early Stage of the COVID-19 Pandemic. *Geophysical Research Letters*, **2021**, 48, 2e020GL091265	4.9	13
42	Impacts of Chemical Degradation on the Global Budget of Atmospheric Levoglucosan and Its Use As a Biomass Burning Tracer. *Environmental Science & Technology*, **2021**, 55, 5525-5536	10.3	8
41	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants. *Atmospheric Chemistry and Physics*, **2021**, 21, 13973-13996	6.8	7
40	UK Ammonia Emissions Estimated With Satellite Observations and GEOS-Chem. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2021JD035237	4.4	2
39	Direct links between hygroscopicity and mixing state of ambient aerosols: estimating particle hygroscopicity from their single-particle mass spectra. *Atmospheric Chemistry and Physics*, **2020**, 20, 6273-6290	6.8	6
38	Validation of satellite formaldehyde (HCHO) retrievals using observations from 12 aircraft campaigns. *Atmospheric Chemistry and Physics*, **2020**, 20, 12329-12345	6.8	10
37	An inversion of NO_{<i>x</i>} and non-methane volatile organic compound (NMVOC) emissions using satellite observations during the KORUS-AQ campaign and implications for surface ozone over East Asia. *Atmospheric Chemistry and Physics*, **2020**, 20, 9837-9854	6.8	15
36	Development of the global atmospheric chemistry general circulation model BCC-GEOS-Chem v1.0: model description and evaluation. *Geoscientific Model Development*, **2020**, 13, 3817-3838	6.3	6
35	Effect of sea salt aerosol on tropospheric bromine chemistry. *Atmospheric Chemistry and Physics*, **2019**, 19, 6497-6507	6.8	22
34	The role of chlorine in global tropospheric chemistry. *Atmospheric Chemistry and Physics*, **2019**, 19, 3981-4003	6.8	96
33	The 2005–2016 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	4.9	37

32	Possible heterogeneous chemistry of hydroxymethanesulfonate (HMS) in northern China winter haze. *Atmospheric Chemistry and Physics*, **2019**, 19, 1357-1371	6.8	63
31	Satellite-Observed Changes in Mexico's Offshore Gas Flaring Activity Linked to Oil/Gas Regulations. *Geophysical Research Letters*, **2019**, 46, 1879-1888	4.9	19
30	TEMPO Green Paper: Chemistry, physics, and meteorology experiments with the Tropospheric Emissions: monitoring of pollution instrument **2019**,		8
29	A physics-based approach to oversample multi-satellite, multispecies observations to a common grid. *Atmospheric Measurement Techniques*, **2018**, 11, 6679-6701	4	31
28	The role of chlorine in tropospheric chemistry **2018**,		1
27	Effect of sea-salt aerosol on tropospheric bromine chemistry **2018**,		1
26	Possible heterogeneous hydroxymethanesulfonate (HMS) chemistry in northern China winter haze and implications for rapid sulfate formation **2018**,		2
25	High-resolution inversion of OMI formaldehyde columns to quantify isoprene emission on ecosystem-relevant scales: application to the southeast US. *Atmospheric Chemistry and Physics*, **2018**, 18, 5483-5497	6.8	43
24	Formaldehyde (HCHO) As a Hazardous Air Pollutant: Mapping Surface Air Concentrations from Satellite and Inferring Cancer Risks in the United States. *Environmental Science & Technology*, **2017**, 51, 5650-5657	10.3	80
23	Long-term (2005–2014) trends in formaldehyde (HCHO) columns across North America as seen by the OMI satellite instrument: Evidence of changing emissions of volatile organic compounds. *Geophysical Research Letters*, **2017**, 44, 7079-7086	4.9	36
22	Glyoxal yield from isoprene oxidation and relation to formaldehyde: chemical mechanism, constraints from SENEX aircraft observations, and interpretation of OMI satellite data. *Atmospheric Chemistry and Physics*, **2017**, 17, 8725-8738	6.8	56
21	High-resolution inversion of OMI formaldehyde columns to quantify isoprene emission on ecosystem-relevant scales: application to the Southeast US **2017**,		1
20	Sensitivity to grid resolution in the ability of a chemical transport model to simulate observed oxidant chemistry under high-isoprene conditions **2016**,		2
19	NO_x emissions, isoprene oxidation pathways, vertical mixing, and implications for surface ozone in the Southeast United States **2016**,		8
18	Observing atmospheric formaldehyde (HCHO) from space: validation and intercomparison of six retrievals from four satellites (OMI, GOME2A, GOME2B, OMPS) with SEACRS aircraft observations over the Southeast US. *Atmospheric Chemistry and Physics*, **2016**, 16, 13477-13490	6.8	75
17	Sensitivity to grid resolution in the ability of a chemical transport model to simulate observed oxidant chemistry under high-isoprene conditions. *Atmospheric Chemistry and Physics*, **2016**, 16, 4369-4378	6.8	45
16	Why do Models Overestimate Surface Ozone in the Southeastern United States?. *Atmospheric Chemistry and Physics*, **2016**, 16, 13561-13577	6.8	239
15	Aqueous-phase mechanism for secondary organic aerosol formation from isoprene: application to the Southeast United States and co-benefit of SO emission controls. *Atmospheric Chemistry and Physics*, **2016**, 16, 1603-1618	6.8	197

14	Organic nitrate chemistry and its implications for nitrogen budgets in an isoprene- and monoterpene-rich atmosphere: constraints from aircraft (SEACRS) and ground-based (SOAS) observations in the Southeast US. *Atmospheric Chemistry and Physics*, **2016**, 16, 5969-5991	6.8	129
13	Observing atmospheric formaldehyde (HCHO) from space: validation and intercomparison of six retrievals from four satellites (OMI, GOME2A, GOME2B, OMPS) with SEAC⁴RS aircraft observations over the Southeast US **2016**,		6
12	Organic nitrate chemistry and its implications for nitrogen budgets in an isoprene- and monoterpene-rich atmosphere: constraints from aircraft (SEAC⁴RS) and ground-based (SOAS) observations in the Southeast US **2016**,		3
11	Glyoxal yield from isoprene oxidation and relation to formaldehyde: chemical mechanism, constraints from SENEX aircraft observations, and interpretation of OMI satellite data **2016**,		3
10	Sources, seasonality, and trends of southeast US aerosol: an integrated analysis of surface, aircraft, and satellite observations with the GEOS-Chem chemical transport model. *Atmospheric Chemistry and Physics*, **2015**, 15, 10411-10433	6.8	168
9	Anthropogenic emissions of highly reactive volatile organic compounds in eastern Texas inferred from oversampling of satellite (OMI) measurements of HCHO columns. *Environmental Research Letters*, **2014**, 9, 114004	6.2	72
8	Analysis of the transport pathways and potential sources of PM10 in Shanghai based on three methods. *Science of the Total Environment*, **2012**, 414, 525-34	10.2	71
7	Transport pathways and potential sources of PM10 in Beijing. *Atmospheric Environment*, **2011**, 45, 594-604	3.3	84
6	Mercury emissions from biomass burning in China. *Environmental Science & Technology*, **2011**, 45, 9442-8	10.3	66
5	A new emission inventory for nonagricultural open fires in Asia from 2000 to 2009. *Environmental Research Letters*, **2010**, 5, 014014	6.2	23
4	Validation of satellite formaldehyde (HCHO) retrievals using observations from 12 aircraft campaigns		3
3	Aqueous-phase mechanism for secondary organic aerosol formation from isoprene: application to the Southeast United States and co-benefit of SO₂ emission controls		6
2	Development of the global atmospheric general circulation-chemistry model BCC-GEOS-Chem v1.0: model description and evaluation		2
1	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants		2