Melissa Payer Sulprizio

List of Publications by Year
in descending order

45 papers	3,693 citations	159585 30 h-index	233421 45 g-index
45 all docs	45 docs citations	45 times ranked	4489 citing authors

#	Article	IF	Citations
1	Methane emissions in the United States, Canada, and Mexico: evaluation of national methane emission inventories and 2010â€“2017 sectoral trends by inverse analysis of in situ (GLOBALVIEWplus) Tj ETQq1 1 0.784314 rgBT /Overlock 1 0 T Atmospheric Chemistry and Physics, 2022, 22, 395-418.	4.9	25
2	Updated Global Fuel Exploitation Inventory (GFEI) for methane emissions from the oil, gas, and coal sectors: evaluation with inversions of atmospheric methane observations. Atmospheric Chemistry and Physics, 2022, 22, 3235-3249.	4.9	22
3	An Onlineâ€Learned Neural Network Chemical Solver for Stable Longâ€Term Global Simulations of Atmospheric Chemistry. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	10
4	Simulation of radon-222 with the GEOS-Chem global model: emissions, seasonality, and convective transport. Atmospheric Chemistry and Physics, 2021, 21, 1861-1887.	4.9	25
5	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, .	7.1	138
6	Global methane budget and trend, 2010â€“2017: complementarity of inverse analyses using in situ (GLOBALVIEWplus CH₄ ObsPack) and satellite (GOSAT) observations. Atmospheric Chemistry and Physics, 2021, 21, 4637-4657.	4.9	55
7	2010â€“2015 North American methane emissions, sectoral contributions, and trends: a high-resolution inversion of GOSAT observations of atmospheric methane. Atmospheric Chemistry and Physics, 2021, 21, 4339-4356.	4.9	45
8	Attribution of the accelerating increase in atmospheric methane during 2010â€“2018 by inverse analysis of GOSAT observations. Atmospheric Chemistry and Physics, 2021, 21, 3643-3666.	4.9	68
9	Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem. Environmental Research, 2021, 195, 110754.	7.5	391
10	WRF-GC (v2.0): online two-way coupling of WRF (v3.9.1.1) and GEOS-Chem (v12.7.2) for modeling regional atmospheric chemistryâ€“meteorology interactions. Geoscientific Model Development, 2021, 14, 3741-3768.	3.6	17
11	Satellite-based survey of extreme methane emissions in the Permian basin. Science Advances, 2021, 7, .	10.3	66
12	Unravelling a large methane emission discrepancy in Mexico using satellite observations. Remote Sensing of Environment, 2021, 260, 112461.	11.0	49
13	Grid-independent high-resolution dust emissions (v1.0) for chemical transport models: application to GEOS-Chem (12.5.0). Geoscientific Model Development, 2021, 14, 4249-4260.	3.6	15
14	Reduced-cost construction of Jacobian matrices for high-resolution inversions of satellite observations of atmospheric composition. Atmospheric Measurement Techniques, 2021, 14, 5521-5534.	3.1	5
15	Harmonized Emissions Component (HEMCO) 3.0 as a versatile emissions component for atmospheric models: application in the GEOS-Chem, NASA GEOS, WRF-GC, CESM2, NOAA GEFS-Aerosol, and NOAA UFS models. Geoscientific Model Development, 2021, 14, 5487-5506.	3.6	23
16	Global distribution of methane emissions: a comparative inverse analysis of observations from the TROPOMI and GOSAT satellite instruments. Atmospheric Chemistry and Physics, 2021, 21, 14159-14175.	4.9	54
17	GCAP 2.0: a global 3-D chemical-transport model framework for past, present, and future climate scenarios. Geoscientific Model Development, 2021, 14, 5789-5823.	3.6	11
18	Estimating 2010â€“2015 anthropogenic and natural methane emissions in Canada using ECCC surface and GOSAT satellite observations. Atmospheric Chemistry and Physics, 2021, 21, 18101-18121.	4.9	11

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19	An Ensemble Learning Approach for Estimating High Spatiotemporal Resolution of Ground-Level Ozone in the Contiguous United States. Environmental Science & Technology, 2020, 54, 11037-11047.	10.0	114
20	Enabling Highâ€Performance Cloud Computing for Earth Science Modeling on Over a Thousand Cores: Application to the GEOSâ€Chem Atmospheric Chemistry Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002064.	3.8	23
21	Quantifying methane emissions from the largest oil-producing basin in the United States from space. Science Advances, 2020, 6, eaaz5120.	10.3	155
22	A global gridded (0.1Â°â€‰Ã—â€‰0.1Â°) inventory of methane emissions from oil, gas, and coal exploitation based on national reports to the United Nations Framework Convention on Climate Change. Earth System Science Data, 2020, 12, 563-575.	9.9	60
23	WRF-GC (v1.0): online coupling of WRF (v3.9.1.1) and GEOS-Chem (v12.2.1) for regional atmospheric chemistry modeling â€“ Part 1: Description of the one-way model. Geoscientific Model Development, 2020, 13, 3241-3265.	3.6	25
24	Global distribution of methane emissions, emission trends, and OH concentrations and trends inferred from an inversion of GOSAT satellite data for 2010â€“2015. Atmospheric Chemistry and Physics, 2019, 19, 7859-7881.	4.9	111
25	Using satellite observations of tropospheric NO₂ columns to infer long-term trends in US NO_{<i>x</i>} emissions:Âthe importance of accounting for the free tropospheric NO₂ background. Atmospheric Chemistry and Physics, 2019, 19, 8863-8878.	4.9	89
26	Enabling Immediate Access to Earth Science Models through Cloud Computing: Application to the GEOS-Chem Model. Bulletin of the American Meteorological Society, 2019, 100, 1943-1960.	3.3	14
27	Effect of sea salt aerosol on tropospheric bromine chemistry. Atmospheric Chemistry and Physics, 2019, 19, 6497-6507.	4.9	36
28	The role of chlorine in global tropospheric chemistry. Atmospheric Chemistry and Physics, 2019, 19, 3981-4003.	4.9	160
29	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.	4.0	66
30	High-resolution inversion of methane emissions in the Southeast US using SEAC⁴RS aircraft observations of atmospheric methane: anthropogenic and wetland sources. Atmospheric Chemistry and Physics, 2018, 18, 6483-6491.	4.9	38
31	Comparative analysis of low-Earth orbit (TROPOMI) and geostationary (GeoCARB, GEO-CAPE) satellite instruments for constraining methane emissions on fine regional scales: application to the Southeast US. Atmospheric Measurement Techniques, 2018, 11, 6379-6388.	3.1	17
32	Monitoring global tropospheric OH concentrations using satellite observations of atmospheric methane. Atmospheric Chemistry and Physics, 2018, 18, 15959-15973.	4.9	34
33	Global impact of nitrate photolysis in sea-salt aerosol on NO_{<i>x</i>}, OH, and O₃ in the marine boundary layer. Atmospheric Chemistry and Physics, 2018, 18, 11185-11203.	4.9	62
34	Burden of Disease from Rising Coal-Fired Power Plant Emissions in Southeast Asia. Environmental Science & Technology, 2017, 51, 1467-1476.	10.0	122
35	Who Among the Elderly Is Most Vulnerable to Exposure to and Health Risks of Fine Particulate Matter From Wildfire Smoke?. American Journal of Epidemiology, 2017, 186, 730-735.	3.4	79
36	Multidecadal trends in aerosol radiative forcing over the Arctic: Contribution of changes in anthropogenic aerosol to Arctic warming since 1980. Journal of Geophysical Research D: Atmospheres, 2017, 122, 3573-3594.	3.3	70

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37	Global budget of tropospheric ozone: Evaluating recent model advances with satellite (OMI), aircraft (IAGOS), and ozonesonde observations. Atmospheric Environment, 2017, 167, 323-334.	4.1	74
38	Public health impacts of the severe haze in Equatorial Asia in Septemberâ€“October 2015: demonstration of a new framework for informing fire management strategies to reduce downwind smoke exposure. Environmental Research Letters, 2016, 11, 094023.	5.2	249
39	Particulate air pollution from wildfires in the Western US under climate change. Climatic Change, 2016, 138, 655-666.	3.6	219
40	Gridded National Inventory of U.S. Methane Emissions. Environmental Science & Technology, 2016, 50, 13123-13133.	10.0	165
41	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. Atmospheric Chemistry and Physics, 2016, 16, 13477-13490.	4.9	99
42	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.	4.9	60
43	Why do models overestimate surface ozone in the Southeast United States?. Atmospheric Chemistry and Physics, 2016, 16, 13561-13577.	4.9	320
44	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. Atmospheric Chemistry and Physics, 2016, 16, 5969-5991.	4.9	173
45	Future respiratory hospital admissions from wildfire smoke under climate change in the Western US. Environmental Research Letters, 2016, 11, 124018.	5.2	29