Vaishali Naik

List of Publications by Year in Descending Order

119 papers	12,369 citations	48 h-index	111 g-index
133 ext. papers	14,719 ext. citations	7.4 avg, IF	5.62 L-index

#	Paper	IF	Citations
119	Climate change penalty and benefit on surface ozone: a global perspective based on CMIP6 earth system models. *Environmental Research Letters*, **2022**, 17, 024014	6.2	2
118	Tropospheric ozone in CMIP6 simulations. *Atmospheric Chemistry and Physics*, **2021**, 21, 4187-4218	6.8	27
117	Global modeling of hydrogen using GFDL-AM4.1: Sensitivity of soil removal and radiative forcing. *International Journal of Hydrogen Energy*, **2021**, 46, 13446-13460	6.7	3
116	Effective radiative forcing from emissions of reactive gases and aerosols – a multi-model comparison. *Atmospheric Chemistry and Physics*, **2021**, 21, 853-874	6.8	18
115	Assessing the Influence of COVID-19 on the Shortwave Radiative Fluxes Over the East Asian Marginal Seas. *Geophysical Research Letters*, **2021**, 48, e2020GL091699	4.9	8
114	Hydroxyl Radical (OH) Response to Meteorological Forcing and Implication for the Methane Budget. *Geophysical Research Letters*, **2021**, 48, e2021GL094140	4.9	0
113	Climate-driven chemistry and aerosol feedbacks in CMIP6 Earth system models. *Atmospheric Chemistry and Physics*, **2021**, 21, 1105-1126	6.8	10
112	The GFDL Earth System Model Version 4.1 (GFDL-ESM 4.1): Overall Coupled Model Description and Simulation Characteristics. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002015	7.1	97
111	Retrieving the global distribution of the threshold of wind erosion from satellite data and implementing it into the Geophysical Fluid Dynamics Laboratory land–atmosphere model (GFDL AM4.0/LM4.0). *Atmospheric Chemistry and Physics*, **2020**, 20, 55-81	6.8	8
110	Historical and future changes in air pollutants from CMIP6 models **2020**,		6
109	Investigation of the global methane budget over 1980–2017 using GFDL-AM4.1. *Atmospheric Chemistry and Physics*, **2020**, 20, 805-827	6.8	14
108	Tropospheric Ozone Assessment Report. *Elementa*, **2020**, 8,	3.6	18
107	Trends in global tropospheric hydroxyl radical and methane lifetime since 1850 from AerChemMIP. *Atmospheric Chemistry and Physics*, **2020**, 20, 12905-12920	6.8	19
106	Historical and future changes in air pollutants from CMIP6 models. *Atmospheric Chemistry and Physics*, **2020**, 20, 14547-14579	6.8	38
105	Climate and air quality impacts due to mitigation of non-methane near-term climate forcers. *Atmospheric Chemistry and Physics*, **2020**, 20, 9641-9663	6.8	11
104	The Global Methane Budget 2000–2017. *Earth System Science Data*, **2020**, 12, 1561-1623	10.5	463
103	Reappraisal of the Climate Impacts of Ozone-Depleting Substances. *Geophysical Research Letters*, **2020**, 47, e2020GL088295	4.9	9

102	The GFDL Global Atmospheric Chemistry-Climate Model AM4.1: Model Description and Simulation Characteristics. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002032	7.1	25
101	Public Health and Climate Benefits and Trade-Offs of U.S. Vehicle Electrification. *GeoHealth*, **2020**, 4, e2020GH000275	5	12
100	SPEAR: The Next Generation GFDL Modeling System for Seasonal to Multidecadal Prediction and Projection. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS001895	7.1	40
99	Investigation of the global methane budget over 1980–2017 using GFDL-AM4.1 **2019**,		1
98	Source attribution of black carbon affecting regional air quality, premature mortality and glacial deposition in 2000. *Atmospheric Environment*, **2019**, 206, 144-155	5.3	3
97	Air quality impacts from the electrification of light-duty passenger vehicles in the United States. *Atmospheric Environment*, **2019**, 208, 95-102	5.3	22
96	Radiative Forcing of Climate: The Historical Evolution of the Radiative Forcing Concept, the Forcing Agents and their Quantification, and Applications. *Meteorological Monographs*, **2019**, 59, 14.1-14.101	5.7	34
95	Structure and Performance of GFDL's CM4.0 Climate Model. *Journal of Advances in Modeling Earth Systems*, **2019**, 11, 3691-3727	7.1	128
94	The GFDL Global Atmosphere and Land Model AM4.0/LM4.0: 2. Model Description, Sensitivity Studies, and Tuning Strategies. *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 735-769	7.1	122
93	The GFDL Global Atmosphere and Land Model AM4.0/LM4.0: 1. Simulation Characteristics With Prescribed SSTs. *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 691-734	7.1	100
92	Uncertainties in models of tropospheric ozone based on Monte Carlo analysis: Tropospheric ozone burdens, atmospheric lifetimes and surface distributions. *Atmospheric Environment*, **2018**, 180, 93-102	5.3	20
91	Combining model projections with site-level observations to estimate changes in distributions and seasonality of ozone in surface air over the U.S.A.. *Atmospheric Environment*, **2018**, 193, 302-315	5.3	7
90	Modulation of hydroxyl variability by ENSO in the absence of external forcing. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 8931-8936	11.5	15
89	Tropospheric Ozone Assessment Report: Assessment of global-scale model performance for global and regional ozone distributions, variability, and trends. *Elementa*, **2018**, 6,	3.6	121
88	Tropospheric ozone assessment report: Global ozone metrics for climate change, human health, and crop/ecosystem research. *Elementa*, **2018**, 1, 1	3.6	115
87	Chapter 13 : Air Quality. Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II **2018**,		3
86	Rapid and reliable assessment of methane impacts on climate. *Atmospheric Chemistry and Physics*, **2018**, 18, 15555-15568	6.8	5
85	Exploring the relationship between surface PM_{2.5} and meteorology in Northern India **2018**,		1

84	Exploring the relationship between surface PM_{2.5} and meteorology in Northern India. *Atmospheric Chemistry and Physics*, **2018**, 18, 10157-10175	6.8	34
83	Changes in the aerosol direct radiative forcing from 2001 to 2015: observational constraints and regional mechanisms. *Atmospheric Chemistry and Physics*, **2018**, 18, 13265-13281	6.8	39
82	Changes in the aerosol direct radiative forcing from 2001 to 2015: observational constraints and regional mechanisms **2018**,		1
81	Rapid and reliable assessment of methane impacts on climate **2018**,		1
80	Cobenefits of global and domestic greenhouse gas emissions for air quality and human health. *Lancet, The*, **2017**, 389, S23	40	11
79	Impact of volcanic aerosols on stratospheric ozone recovery. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 9515-9528	4.4	3
78	FUTURE GLOBAL MORTALITY FROM CHANGES IN AIR POLLUTION ATTRIBUTABLE TO CLIMATE CHANGE. *Nature Climate Change*, **2017**, 7, 647-651	21.4	114
77	Gas-aerosol partitioning of ammonia in biomass burning plumes: Implications for the interpretation of spaceborne observations of ammonia and the radiative forcing of ammonium nitrate. *Geophysical Research Letters*, **2017**, 44, 8084-8093	4.9	23
76	Variability and quasi-decadal changes in the methane budget over the period 2000–2012. *Atmospheric Chemistry and Physics*, **2017**, 17, 11135-11161	6.8	69
75	Comparison of emissions inventories of anthropogenic air pollutants and greenhouse gases in China. *Atmospheric Chemistry and Physics*, **2017**, 17, 6393-6421	6.8	77
74	Variability and quasi-decadal changes in the methane budget over the period 2000–2012 **2017**,		2
73	The effect of future ambient air pollution on human premature mortality to 2100 using output from the ACCMIP model ensemble. *Atmospheric Chemistry and Physics*, **2016**, 16, 9847-9862	6.8	65
72	Sensitivity of nitrate aerosols to ammonia emissions and to nitrate chemistry: implications for present and future nitrate optical depth. *Atmospheric Chemistry and Physics*, **2016**, 16, 1459-1477	6.8	55
71	Co-benefits of global and regional greenhouse gas mitigation on U.S. air quality in 2050. *Atmospheric Chemistry and Physics*, **2016**, 16, 9533-9548	6.8	21
70	Effect of climate change on surface ozone over North America, Europe, and East Asia. *Geophysical Research Letters*, **2016**, 43, 3509-3518	4.9	31
69	The global methane budget 2000–2012. *Earth System Science Data*, **2016**, 8, 697-751	10.5	641
68	Air quality modeling with WRF-Chem v3.5 in East Asia: sensitivity to emissions and evaluation of simulated air quality. *Geoscientific Model Development*, **2016**, 9, 1201-1218	6.3	42
67	The effect of future ambient air pollution on human premature mortality to 2100 using output from the ACCMIP model ensemble **2016**,		1

66	Seasonal cycles of O3 in the marine boundary layer: Observation and model simulation comparisons. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 538-557	4.4	26
65	Quantifying PM2.5-meteorology sensitivities in a global climate model. *Atmospheric Environment*, **2016**, 142, 43-56	5.3	51
64	Air quality and climate connections. *Journal of the Air and Waste Management Association*, **2015**, 65, 645-685	2.4	224
63	Radiative forcing and climate response to projected 21st century aerosol decreases. *Atmospheric Chemistry and Physics*, **2015**, 15, 12681-12703	6.8	55
62	Use of North American and European air quality networks to evaluate global chemistry□climate modeling of surface ozone. *Atmospheric Chemistry and Physics*, **2015**, 15, 10581-10596	6.8	35
61	Projecting policy-relevant metrics for high summertime ozone pollution events over the eastern United States due to climate and emission changes during the 21st century. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 784-800	4.4	41
60	Estimating North American background ozone in U.S. surface air with two independent global models: Variability, uncertainties, and recommendations. *Atmospheric Environment*, **2014**, 96, 284-300	5.3	75
59	Contribution of local and remote anthropogenic aerosols to the twentieth century weakening of the South Asian Monsoon. *Geophysical Research Letters*, **2014**, 41, 680-687	4.9	77
58	Long-term changes in lower tropospheric baseline ozone concentrations: Comparing chemistry-climate models and observations at northern midlatitudes. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 5719-5736	4.4	124
57	Twenty-first century reversal of the surface ozone seasonal cycle over the northeastern United States. *Geophysical Research Letters*, **2014**, 41, 7343-7350	4.9	42
56	Global distribution and trends of tropospheric ozone: An observation-based review. *Elementa*, **2014**, 2,	3.6	292
55	Three decades of global methane sources and sinks. *Nature Geoscience*, **2013**, 6, 813-823	18.3	1293
54	Global premature mortality due to anthropogenic outdoor air pollution and the contribution of past climate change. *Environmental Research Letters*, **2013**, 8, 034005	6.2	279
53	The roles of aerosol direct and indirect effects in past and future climate change. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 4521-4532	4.4	125
52	Co-benefits of Global Greenhouse Gas Mitigation for Future Air Quality and Human Health. *Nature Climate Change*, **2013**, 3, 885-889	21.4	374
51	Sensitivity of tropospheric oxidants to biomass burning emissions: implications for radiative forcing. *Geophysical Research Letters*, **2013**, 40, 1241-1246	4.9	33
50	The Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): overview and description of models, simulations and climate diagnostics. *Geoscientific Model Development*, **2013**, 6, 179-206	6.3	304
49	Preindustrial to present-day changes in tropospheric hydroxyl radical and methane lifetime from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics*, **2013**, 13, 5277-5298	6.8	234

48	A 4-D climatology (1979–2009) of the monthly tropospheric aerosol optical depth distribution over the Mediterranean region from a comparative evaluation and blending of remote sensing and model products. *Atmospheric Measurement Techniques*, **2013**, 6, 1287-1314	4	109
47	Pre-industrial to end 21st century projections of tropospheric ozone from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics* , **2013**, 13, 2063-2090	6.8	420
46	Evaluation of preindustrial to present-day black carbon and its albedo forcing from Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics* , **2013**, 13, 2607-2634	6.8	111
45	Corrigendum to "Evaluation of preindustrial to present-day black carbon and its albedo forcing from Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP)" published in Atmos. Chem. Phys., 13, 2607–2634, 2013. *Atmospheric Chemistry and Physics*, **2013**, 13, 6553-6554	6.8	3
44	Tropospheric ozone changes, radiative forcing and attribution to emissions in the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). *Atmospheric Chemistry and Physics* , **2013**, 13, 3063-3085	6.8	273
43	Air pollution and associated human mortality: the role of air pollutant emissions, climate change and methane concentration increases from the preindustrial period to present. *Atmospheric Chemistry and Physics*, **2013**, 13, 1377-1394	6.8	106
42	Analysis of present day and future OH and methane lifetime in the ACCMIP simulations. *Atmospheric Chemistry and Physics*, **2013**, 13, 2563-2587	6.8	209
41	Radiative forcing in the ACCMIP historical and future climate simulations. *Atmospheric Chemistry and Physics*, **2013**, 13, 2939-2974	6.8	324
40	Evaluation of ACCMIP outgoing longwave radiation from tropospheric ozone using TES satellite observations. *Atmospheric Chemistry and Physics*, **2013**, 13, 4057-4072	6.8	46
39	Net radiative forcing and air quality responses to regional CO emission reductions. *Atmospheric Chemistry and Physics*, **2013**, 13, 5381-5399	6.8	10
38	Impact of preindustrial to present-day changes in short-lived pollutant emissions on atmospheric composition and climate forcing. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 8086-8110	4.4	91
37	Surface ozone-temperature relationships in the eastern US: A monthly climatology for evaluating chemistry-climate models. *Atmospheric Environment*, **2012**, 47, 142-153	5.3	126
36	Transport of Asian ozone pollution into surface air over the western United States in spring. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		196
35	The influence of ozone precursor emissions from four world regions on tropospheric composition and radiative climate forcing. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		84
34	Springtime high surface ozone events over the western United States: Quantifying the role of stratospheric intrusions. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		191
33	Global air quality and climate. *Chemical Society Reviews*, **2012**, 41, 6663-83	58.5	334
32	The Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): overview and description of models, simulations and climate diagnostics **2012**,		6
31	Climate versus emission drivers of methane lifetime against loss by tropospheric OH from 1860–2100. *Atmospheric Chemistry and Physics*, **2012**, 12, 12021-12036	6.8	52

30	The Dynamical Core, Physical Parameterizations, and Basic Simulation Characteristics of the Atmospheric Component AM3 of the GFDL Global Coupled Model CM3. *Journal of Climate*, **2011**, 24, 3484-3519	4.4	768
29	Historical (1850–2000) gridded anthropogenic and biomass burning emissions of reactive gases and aerosols: methodology and application. *Atmospheric Chemistry and Physics*, **2010**, 10, 7017-7039	6.8	1724
28	Observational constraints on the global atmospheric budget of ethanol. *Atmospheric Chemistry and Physics*, **2010**, 10, 5361-5370	6.8	48
27	Present and potential future contributions of sulfate, black and organic carbon aerosols from China to global air quality, premature mortality and radiative forcing. *Atmospheric Environment*, **2009**, 43, 2814–2822	5.3	95
26	Effect of regional precursor emission controls on long-range ozone transport – Part 2: Steady-state changes in ozone air quality and impacts on human mortality. *Atmospheric Chemistry and Physics*, **2009**, 9, 6095-6107	6.8	39
25	Effect of regional precursor emission controls on long-range ozone transport – Part 1: Short-term changes in ozone air quality. *Atmospheric Chemistry and Physics*, **2009**, 9, 6077-6093	6.8	30
24	Characterizing the tropospheric ozone response to methane emission controls and the benefits to climate and air quality. *Journal of Geophysical Research*, **2008**, 113,		107
23	On the sensitivity of radiative forcing from biomass burning aerosols and ozone to emission location. *Geophysical Research Letters*, **2007**, 34,	4.9	39
22	Ozone air quality and radiative forcing consequences of changes in ozone precursor emissions. *Geophysical Research Letters*, **2007**, 34,	4.9	53
21	Net radiative forcing due to changes in regional emissions of tropospheric ozone precursors. *Journal of Geophysical Research*, **2005**, 110,		84
20	Sensitivity of global biogenic isoprenoid emissions to climate variability and atmospheric CO2. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a		53
19	Influence of geoengineered climate on the terrestrial biosphere. *Environmental Management*, **2003**, 32, 373-81	3.1	24
18	Evaluation of the atmospheric lifetime and radiative forcing on climate for 1,2,2,2-tetrafluoroethyl trifluoromethyl ether (CF3OCHFCF3). *Journal of Geophysical Research*, **2001**, 106, 12615-12618		8
17	Global warming potential assessment for CF3OCF = CF2. *Journal of Geophysical Research*, **2000**, 105, 4019-4029		16
16	Consistent sets of atmospheric lifetimes and radiative forcings on climate for CFC replacements: HCFCs and HFCs. *Journal of Geophysical Research*, **2000**, 105, 6903-6914		54
15	Climate versus emission drivers of methane lifetime from 1860–2100		5
14	Radiative forcing in the ACCMIP historical and future climate simulations		21
13	Pre-industrial to end 21st century projections of tropospheric ozone from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP)		8

12	Evaluation of preindustrial to present-day black carbon and its albedo forcing from ACCMIP (Atmospheric Chemistry and Climate Model Intercomparison Project)	12
11	Analysis of present day and future OH and methane lifetime in the ACCMIP simulations	10
10	Observational constraints on ozone radiative forcing from the Atmospheric Chemistry Climate Model Intercomparison Project (ACCMIP)	7
9	Tropospheric ozone changes, radiative forcing and attribution to emissions in the Atmospheric Chemistry and Climate Model Inter-comparison Project (ACCMIP)	8
8	Preindustrial to present day changes in tropospheric hydroxyl radical and methane lifetime from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP)	5
7	Use of North American and European air quality networks to evaluate global chemistry-climate modeling of surface ozone	3
6	Sensitivity of nitrate aerosols to ammonia emissions and to nitrate chemistry: implications for present and future nitrate optical depth	3
5	Radiative forcing and climate response to projected 21st century aerosol decreases	6
4	Effect of regional precursor emission controls on long-range ozone transport Part 2: steady-state changes in ozone air quality and impacts on human mortality	1
3	Air Quality Modeling with WRF-Chem v3.5 in East and South Asia: sensitivity to emissions and evaluation of simulated air quality	2
2	Effect of regional precursor emission controls on long-range ozone transport Part 1: short-term changes in ozone air quality	1
1	Air pollution and associated human mortality: the role of air pollutant emissions, climate change and methane concentration increases during the industrial period	1