Ina Tegen

List of Publications by Year
in descending order

133 papers	20,250 citations	25014 57 h-index	14736 127 g-index
184 all docs	184 docs citations	184 times ranked	12029 citing authors

#	Article	IF	Citations
1	Global Iron Connections Between Desert Dust, Ocean Biogeochemistry, and Climate. Science, 2005, 308, 67-71.	6.0	2,365
2	Sources and distributions of dust aerosols simulated with the GOCART model. Journal of Geophysical Research, 2001, 106, 20255-20273.	3.3	1,620
3	The aerosol-climate model ECHAM5-HAM. Atmospheric Chemistry and Physics, 2005, 5, 1125-1156.	1.9	990
4	Atmospheric global dust cycle and iron inputs to the ocean. Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	1.9	930
5	The influence on climate forcing of mineral aerosols from disturbed soils. Nature, 1996, 380, 419-422.	13.7	909
6	Modeling of mineral dust in the atmosphere: Sources, transport, and optical thickness. Journal of Geophysical Research, 1994, 99, 22897.	3.3	724
7	North African dust emissions and transport. Earth-Science Reviews, 2006, 79, 73-100.	4.0	551
8	Modeling of particle size distribution and its influence on the radiative properties of mineral dust aerosol. Journal of Geophysical Research, 1996, 101, 19237-19244.	3.3	534
9	Contribution of different aerosol species to the global aerosol extinction optical thickness: Estimates from model results. Journal of Geophysical Research, 1997, 102, 23895-23915.	3.3	522
10	Contribution to the atmospheric mineral aerosol load from land surface modification. Journal of Geophysical Research, 1995, 100, 18707.	3.3	502
11	Iron supply and demand in the upper ocean. Global Biogeochemical Cycles, 2000, 14, 281-295.	1.9	472
12	Climate Response to Soil Dust Aerosols. Journal of Climate, 1998, 11, 3247-3267.	1.2	471
13	Impact of vegetation and preferential source areas on global dust aerosol: Results from a model study. Journal of Geophysical Research, 2002, 107, AAC 14-1-AAC 14-27.	3.3	453
14	Climate forcings in the Industrial era. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 12753-12758.	3.3	344
15	Relative importance of climate and land use in determining present and future global soil dust emission. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	325
16	Surface radiative forcing by soil dust aerosols and the hydrologic cycle. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	321
17	Climate forcings in Goddard Institute for Space Studies SI2000 simulations. Journal of Geophysical Research, 2002, 107, ACL 2-1.	3.3	302
18	Quantifying mineral dust mass budgets:Terminology, constraints, and current estimates. Eos, 2004, 85, 509-512.	0.1	293

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19	A new Saharan dust source activation frequency map derived from MSGâ€SEVIRI IRâ€channels. Geophysical Research Letters, 2007, 34, .	1.5	260
20	Monthly averages of aerosol properties: A global comparison among models, satellite data, and AERONET ground data. Journal of Geophysical Research, 2003, 108, .	3.3	258
21	Modeling the mineral dust aerosol cycle in the climate system. Quaternary Science Reviews, 2003, 22, 1821-1834.	1.4	242
22	Tropospheric sulfur simulation and sulfate direct radiative forcing in the Goddard Institute for Space Studies general circulation model. Journal of Geophysical Research, 1999, 104, 23799-23822.	3.3	231
23	Meteorological processes forcing Saharan dust emission inferred from MSGâ€SEVIRI observations of subdaily dust source activation and numerical models. Journal of Geophysical Research, 2009, 114, .	3.3	218
24	Mineral dust aerosols in the NASA Goddard Institute for Space Sciences ModelE atmospheric general circulation model. Journal of Geophysical Research, 2006, 111, .	3.3	187
25	Saharan Mineral Dust Experiments SAMUMâ€"1 and SAMUMâ€"2: what have we learned?. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 403.	0.8	187
26	Atmospheric Transport and Deposition of Mineral Dust to the Ocean: Implications for Research Needs. Environmental Science & Technology, 2012, 46, 10390-10404.	4.6	187
27	Impacts of atmospheric nutrient deposition on marine productivity: Roles of nitrogen, phosphorus, and iron. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	1.9	177
28	Links between topography, wind, deflation, lakes and dust: The case of the BodÃ©lÃ© Depression, Chad. Geophysical Research Letters, 2006, 33, .	1.5	176
29	The Saharan Aerosol Long-Range Transport and Aerosolâ€"Cloud-Interaction Experiment: Overview and Selected Highlights. Bulletin of the American Meteorological Society, 2017, 98, 1427-1451.	1.7	173
30	Constraining the magnitude of the global dust cycle by minimizing the difference between a model and observations. Journal of Geophysical Research, 2006, 111, .	3.3	171
31	Hypothesized climate forcing time series for the last 500 years. Journal of Geophysical Research, 2001, 106, 14783-14803.	3.3	166
32	Comparison of satellite based observations of Saharan dust source areas. Remote Sensing of Environment, 2012, 123, 90-97.	4.6	165
33	Forcings and chaos in interannual to decadal climate change. Journal of Geophysical Research, 1997, 102, 25679-25720.	3.3	164
34	The global influence of dust mineralogical composition on heterogeneous ice nucleation in mixed-phase clouds. Environmental Research Letters, 2008, 3, 025003.	2.2	149
35	Quantifying uncertainty in estimates of mineral dust flux: An intercomparison of model performance over the BodÃ©lÃ© Depression, northern Chad. Journal of Geophysical Research, 2008, 113, .	3.3	144
36	Radiative forcing of climate by ice-age atmospheric dust. Climate Dynamics, 2003, 20, 193-202.	1.7	142

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37	Saharan dust transport and deposition towards the tropical northern Atlantic. Atmospheric Chemistry and Physics, 2009, 9, 1173-1189.	1.9	141
38	The role of deep convection and nocturnal lowâ€level jets for dust emission in summertime West Africa: Estimates from convectionâ€permitting simulations. Journal of Geophysical Research D: Atmospheres, 2013, 118, 4385-4400.	1.2	139
39	Seasonal and interannual variability of the mineral dust cycle under present and glacial climate conditions. Journal of Geophysical Research, 2002, 107, AAC 2-1.	3.3	138
40	Interactive soil dust aerosol model in the GISS GCM: 1. Sensitivity of the soil dust cycle to radiative properties of soil dust aerosols. Journal of Geophysical Research, 2001, 106, 18167-18192.	3.3	125
41	Controls of dust emissions by vegetation and topographic depressions: An evaluation using dust storm frequency data. Geophysical Research Letters, 2003, 30, .	1.5	123
42	Climatology of nocturnal lowâ€level jets over North Africa and implications for modeling mineral dust emission. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6100-6121.	1.2	115
43	Feedback upon dust emission by dust radiative forcing through the planetary boundary layer. Journal of Geophysical Research, 2004, 109, .	3.3	108
44	The global aerosolâ€“climate model ECHAM6.3â€“HAM2.3 â€“ Part 1: Aerosol evaluation. Geoscientific Model Development, 2019, 12, 1643-1677.	1.3	103
45	A general circulation model study on the interannual variability of soil dust aerosol. Journal of Geophysical Research, 1998, 103, 25975-25995.	3.3	102
46	Seasonal characteristics of tropical marine boundary layer air measured at the Cape Verde Atmospheric Observatory. Journal of Atmospheric Chemistry, 2010, 67, 87-140.	1.4	97
47	A Comparison of Model- and Satellite-Derived Aerosol Optical Depth and Reflectivity. Journals of the Atmospheric Sciences, 2002, 59, 441-460.	0.6	96
48	Trends in tropospheric aerosol loads and corresponding impact on direct radiative forcing between 1950 and 1990: A model study. Journal of Geophysical Research, 2000, 105, 26971-26989.	3.3	93
49	Estimation of the aerodynamic roughness length in arid and semi-arid regions over the globe with the ERS scatterometer. Journal of Geophysical Research, 2005, 110, .	3.3	86
50	Regional modeling of Saharan dust events using LM-MUSCAT: Model description and case studies. Journal of Geophysical Research, 2007, 112, .	3.3	85
51	A case of extreme particulate matter concentrations over Central Europe caused by dust emitted over the southern Ukraine. Atmospheric Chemistry and Physics, 2008, 8, 997-1016.	1.9	85
52	On the direct and semidirect effects of Saharan dust over Europe: A modeling study. Journal of Geophysical Research, 2007, 112, .	3.3	82
53	Dust radiative feedback on Saharan boundary layer dynamics and dust mobilization. Geophysical Research Letters, 2008, 35, .	1.5	82
54	Dust as a tipping element: The BodÃ©lÃ© Depression, Chad. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20564-20571.	3.3	82

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55	Modelling soil dust aerosol in the BodÃ©lÃ© depression during the BoDEx campaign. Atmospheric Chemistry and Physics, 2006, 6, 4345-4359.	1.9	79
56	Dust mobilization and transport in the northern Sahara during SAMUM 2006 â€“ a meteorological overview. Tellus, Series B: Chemical and Physical Meteorology, 2022, 61, 12.	0.8	79
57	Understanding Causes and Effects of Rapid Warming in the Arctic. Eos, 2017, , .	0.1	76
58	Properties of dust aerosol particles transported to Portugal from the Sahara desert. Tellus, Series B: Chemical and Physical Meteorology, 2022, 61, 297.	0.8	75
59	Anthropogenically induced changes in twentieth century mineral dust burden and the associated impact on radiative forcing. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,526.	1.2	69
60	Characterization of organic aerosol across the global remote troposphere: a comparison of ATom measurements and global chemistry models. Atmospheric Chemistry and Physics, 2020, 20, 4607-4635.	1.9	66
61	Comparing two years of Saharan dust source activation obtained by regional modelling and satellite observations. Atmospheric Chemistry and Physics, 2013, 13, 2381-2390.	1.9	64
62	An improvement on the dust emission scheme in the global aerosol-climate model ECHAM5-HAM. Atmospheric Chemistry and Physics, 2008, 8, 1105-1117.	1.9	63
63	Impact of Dust Radiative Forcing upon Climate. , 2014, , 327-357.		61
64	How important are atmospheric depressions and mobile cyclones for emitting mineral dust aerosol in North Africa?. Atmospheric Chemistry and Physics, 2014, 14, 8983-9000.	1.9	57
65	Multidecadal solar radiation trends in the United States and Germany and direct tropospheric aerosol forcing. Journal of Geophysical Research, 2002, 107, AAC 7-1.	3.3	56
66	On the visibility of airborne volcanic ash and mineral dust from the pilotâ€™s perspective in flight. Physics and Chemistry of the Earth, 2012, 45-46, 87-102.	1.2	56
67	Radiative Forcing of a Tropical Direct Circulation by Soil Dust Aerosols. Journals of the Atmospheric Sciences, 1999, 56, 2403-2433.	0.6	55
68	SALSA2.0: The sectional aerosol module of the aerosolâ€“chemistryâ€“climate model ECHAM6.3.0-HAM2.3-MOZ1.0. Geoscientific Model Development, 2018, 11, 3833-3863.	1.3	52
69	A comparison of seasonal and interannual variability of soil dust aerosols over the Atlantic Ocean as inferred by the TOMS AI and AVHRR AOT retrievals. Journal of Geophysical Research, 2001, 106, 18287-18303.	3.3	51
70	The global distribution of mineral dust. IOP Conference Series: Earth and Environmental Science, 2009, 7, 012001.	0.2	50
71	Mobilization of cesium in organic rich soils: Correlation with production of dissolved organic carbon. Water, Air, and Soil Pollution, 1996, 88, 133-144.	1.1	49
72	Regional Saharan dust modelling during the SAMUM 2006 campaign. Tellus, Series B: Chemical and Physical Meteorology, 2022, 61, 307.	0.8	48

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73	EARLINET observations of the 14â€“22-May long-range dust transport event during SAMUM 2006: validation of results from dust transport modelling. Tellus, Series B: Chemical and Physical Meteorology, 2022, 61, 325.	0.8	47
74	Regional modelling of Saharan dust and biomass-burning smoke: Part 1: Model description and evaluation. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 781.	0.8	47
75	Seasonal variability of Saharan desert dust and ice nucleating particles over Europe. Atmospheric Chemistry and Physics, 2015, 15, 4389-4397.	1.9	47
76	The global aerosolâ€“climate model ECHAM6.3â€“HAM2.3 â€“ Part 2: Cloud evaluation, aerosol radiative forcing, and climate sensitivity. Geoscientific Model Development, 2019, 12, 3609-3639.	1.3	44
77	Harmattan, Saharan heat low, and West African monsoon circulation: modulations on the Saharan dust outflow towards the North Atlantic. Atmospheric Chemistry and Physics, 2017, 17, 10223-10243.	1.9	43
78	Atmospheric Dynamics and Numerical Simulations of Six Frontal Dust Storms in the Middle East Region. Atmosphere, 2021, 12, 125.	1.0	40
79	Simulations of convectivelyâ€driven density currents in the Atlas region using a regional model: Impacts on dust emission and sensitivity to horizontal resolution and convection schemes. Journal of Geophysical Research, 2009, 114, .	3.3	38
80	Global cycling and climate effects of aeolian dust controlled by biological soil crusts. Nature Geoscience, 2022, 15, 458-463.	5.4	36
81	A parameterization of the heterogeneous hydrolysis of N₂O₅ for mass-based aerosol models: improvement of particulate nitrate prediction. Atmospheric Chemistry and Physics, 2018, 18, 673-689.	1.9	35
82	A model study of Saharan dust emissions and distributions during the SAMUMâ€1 campaign. Journal of Geophysical Research, 2010, 115, .	3.3	33
83	Parameterizing cloud condensation nuclei concentrations during HOPE. Atmospheric Chemistry and Physics, 2016, 16, 12059-12079.	1.9	33
84	Modeling Arabian dust mobilization during the Asian summer monsoon: The effect of prescribed versus calculated SST. Geophysical Research Letters, 2004, 31, .	1.5	32
85	Climate Feedback on Aerosol Emission and Atmospheric Concentrations. Current Climate Change Reports, 2018, 4, 1-10.	2.8	32
86	Modelling base cations in Europeâ€"sources, transport and deposition of calcium. Atmospheric Environment, 1999, 33, 2241-2256.	1.9	30
87	The importance of the representation of air pollution emissions for the modeled distribution and radiative effects of black carbon in the Arctic. Atmospheric Chemistry and Physics, 2019, 19, 11159-11183.	1.9	30
88	Climate and air quality impacts due to mitigation of non-methane near-term climate forcers. Atmospheric Chemistry and Physics, 2020, 20, 9641-9663.	1.9	30
89	Global relevance of marine organic aerosol as ice nucleating particles. Atmospheric Chemistry and Physics, 2018, 18, 11423-11445.	1.9	29
90	Simulations of the 2010 EyjafjallajÃ¶kull volcanic ash dispersal over Europe using COSMOâ€“MUSCAT. Atmospheric Environment, 2012, 48, 195-204.	1.9	27

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91	Laboratory experiments to investigate the influence of microbial activity on the migration of cesium in a forest soil. Water, Air, and Soil Pollution, 1991, 57-58, 441-447.	1.1	25
92	Antarctic circumpolar wave impact on marine biology: A natural laboratory for climate change study. Geophysical Research Letters, 2002, 29, 45-1-45-4.	1.5	25
93	Direct and semiâ€direct radiative effects of absorbing aerosols in Europe: Results from a regional model. Geophysical Research Letters, 2012, 39, .	1.5	23
94	A process-based evaluation of dust-emitting winds in the CMIP5 simulation of HadGEM2-ES. Climate Dynamics, 2016, 46, 1107-1130.	1.7	23
95	Mass deposition fluxes of Saharan mineral dust to the tropical northeast Atlantic Ocean: an intercomparison of methods. Atmospheric Chemistry and Physics, 2014, 14, 2245-2266.	1.9	22
96	New developments in the representation of Saharan dust sources in the aerosolâ€“climate model ECHAM6-HAM2. Geoscientific Model Development, 2016, 9, 765-777.	1.3	22
97	Influence of the latitudinal temperature gradient on soil dust concentration and deposition in Greenland. Journal of Geophysical Research, 2000, 105, 7199-7212.	3.3	21
98	Detection and attribution of aerosolâ€“cloud interactions in large-domain large-eddy simulations with the ICOsahedral Non-hydrostatic model. Atmospheric Chemistry and Physics, 2020, 20, 5657-5678.	1.9	20
99	Record of Mineral Aerosols and Their Role in the Earth System. , 2007, , 1-26.		19
100	Regional modelling of Saharan dust and biomass-burning smoke: Part 2: Direct radiative forcing and atmospheric dynamic response. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 800.	0.8	19
101	The impact of mineral dust on cloud formation during the Saharan dust event in AprilÂ2014 over Europe. Atmospheric Chemistry and Physics, 2018, 18, 17545-17572.	1.9	19
102	Do new sea spray aerosol source functions improve the results of a regional aerosol model?. Atmospheric Environment, 2019, 198, 265-278.	1.9	19
103	Coupling aerosols to (cirrus) clouds in the global EMAC-MADE3 aerosolâ€“climate model. Geoscientific Model Development, 2020, 13, 1635-1661.	1.3	19
104	Ice phase in altocumulus clouds over Leipzig: remote sensing observations and detailed modeling. Atmospheric Chemistry and Physics, 2015, 15, 10453-10470.	1.9	18
105	Interannual variability in the Saharan dust source activationâ€"Toward understanding the differences between 2007 and 2008. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4538-4562.	1.2	18
106	Effect of measured surface albedo on modeled Saharan dust solar radiative forcing. Journal of Geophysical Research, 2010, 115, .	3.3	15
107	A regional model of European aerosol transport: Evaluation with sun photometer, lidar and air quality data. Atmospheric Environment, 2012, 47, 519-532.	1.9	15
108	Large-Scale Modeling of Absorbing Aerosols and Their Semi-Direct Effects. Atmosphere, 2018, 9, 380.	1.0	14

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109	The day-to-day co-variability between mineral dust and cloud glaciation: a proxy for heterogeneous freezing. Atmospheric Chemistry and Physics, 2020, 20, 2177-2199.	1.9	14
110	The Importance of the Representation of DMS Oxidation in Global Chemistryâ€Climate Simulations. Geophysical Research Letters, 2021, 48, e2021GL094068.	1.5	14
111	Climate Modeling in the Global Warming Debate. International Geophysics, 2000, 70, 127-164.	0.6	13
112	Spatial and temporal correlation length as a measure for the stationarity of atmospheric dust aerosol distribution. Atmospheric Environment, 2015, 122, 10-21.	1.9	13
113	Surface wind accuracy for modeling mineral dust emissions: Comparing two regional models in a BodÃ©lÃ© case study. Geophysical Research Letters, 2008, 35, .	1.5	12
114	Natural sea-salt emissions moderate the climate forcing of anthropogenic nitrate. Atmospheric Chemistry and Physics, 2020, 20, 771-786.	1.9	12
115	Estimation of cloud condensation nuclei number concentrations and comparison to inÂsitu and lidar observations during the HOPE experiments. Atmospheric Chemistry and Physics, 2020, 20, 8787-8806.	1.9	12
116	Reply to comment by N. M. Mahowald et al. on â€œRelative importance of climate and land use in determining present and future global soil dust emissionâ€. Geophysical Research Letters, 2004, 31, .	1.5	11
117	How well do aerosol retrievals from satellites and representation in global circulation models match ground-based AERONET aerosol statistics?. Advances in Global Change Research, 2001, , 103-158.	1.6	10
118	Implementation of aerosolâ€“cloud interactions in the regional atmosphereâ€“aerosol model COSMO-MUSCAT(5.0) and evaluation using satellite data. Geoscientific Model Development, 2017, 10, 2231-2246.	1.3	10
119	Hemispheric and Seasonal Contrast in Cloud Thermodynamic Phase From Aâ€Train Spaceborne Instruments. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034322.	1.2	10
120	Modelling mineral dust emissions and atmospheric dispersion with MADE3 in EMAC v2.54. Geoscientific Model Development, 2020, 13, 4287-4303.	1.3	10
121	Constraining the Impact of Dustâ€Driven Droplet Freezing on Climate Using Cloudâ€Topâ€Phase Observations. Geophysical Research Letters, 2021, 48, e2021GL092687.	1.5	8
122	Numerical Dust Models. , 2014, , 201-222.		7
123	The Global Atmosphereâ€aerosol Model ICONâ€Aâ€HAM2.3â€“Initial Model Evaluation and Effects of Radiation Balance Tuning on Aerosol Optical Thickness. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	6
124	Modelling mineral dust emissions. IOP Conference Series: Earth and Environmental Science, 2009, 7, 012006.	0.2	5
125	Absorbing aerosol decreases cloud cover in cloudâ€resolving simulations over Germany. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 4083-4100.	1.0	3
126	Climate effect of soil dust aerosols. Journal of Aerosol Science, 1998, 29, S1013-S1014.	1.8	2

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127	Chapter 5.5 Modeling of Saharan dust events within SAMUM: Implications for regional radiation balance and mesoscale circulation. Developments in Environmental Science, 2007, , 523-533.	0.5	2
128	Reply [to â€œComment on â€˜Contribution of different aerosol species to the global aerosol extinction optical thickness: Estimates from model resultsâ€™ by Tegen et al.â€]. Journal of Geophysical Research, 1999, 104, 4249-4250.	3.3	1
129	GLACIAL CLIMATES | Effects of Atmospheric Dust. , 2013, , 729-736.		1
130	Modelling mineral dust in the Central Asian region. E3S Web of Conferences, 2019, 99, 02012.	0.2	1
131	Poster 27 Modeling of Saharan dust events within SAMUM: On the description of the Saharan dust cycle using LM-MUSCAT. Developments in Environmental Science, 2007, , 817-819.	0.5	0
132	GLACIAL CLIMATES | Effects of Atmospheric Dust. , 2007, , 729-739.		0
133	Dust impacts on radiative effects of black carbon aerosol in Central Asia. E3S Web of Conferences, 2019, 99, 04005.	0.2	0