Yves Balkanski

List of Publications by Year
in descending order

139 papers	23,661 citations	18436 62 h-index	10424 139 g-index
220 all docs	220 docs citations	220 times ranked	16663 citing authors

#	Article	IF	Citations
1	Organic aerosol and global climate modelling: a review. Atmospheric Chemistry and Physics, 2005, 5, 1053-1123.	1.9	2,947
2	Climate change projections using the IPSL-CM5 Earth System Model: from CMIP3 to CMIP5. Climate Dynamics, 2013, 40, 2123-2165.	1.7	1,425
3	Analysis and quantification of the diversities of aerosol life cycles within AeroCom. Atmospheric Chemistry and Physics, 2006, 6, 1777-1813.	1.9	1,202
4	The aerosol-climate model ECHAM5-HAM. Atmospheric Chemistry and Physics, 2005, 5, 1125-1156.	1.9	990
5	Global dust model intercomparison in AeroCom phase I. Atmospheric Chemistry and Physics, 2011, 11, 7781-7816.	1.9	839
6	Radiative forcing of the direct aerosol effect from AeroCom Phase II simulations. Atmospheric Chemistry and Physics, 2013, 13, 1853-1877.	1.9	779
7	A review of measurement-based assessments of the aerosol direct radiative effect and forcing. Atmospheric Chemistry and Physics, 2006, 6, 613-666.	1.9	745
8	An AeroCom initial assessment â€" optical properties in aerosol component modules of global models. Atmospheric Chemistry and Physics, 2006, 6, 1815-1834.	1.9	697
9	Radiative forcing by aerosols as derived from the AeroCom present-day and pre-industrial simulations. Atmospheric Chemistry and Physics, 2006, 6, 5225-5246.	1.9	633
10	Dust sources and deposition during the last glacial maximum and current climate: A comparison of model results with paleodata from ice cores and marine sediments. Journal of Geophysical Research, 1999, 104, 15895-15916.	3.3	595
11	Evaluation of black carbon estimations in global aerosol models. Atmospheric Chemistry and Physics, 2009, 9, 9001-9026.	1.9	585
12	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Climate Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002010.	1.3	541
13	Global connections between aeolian dust, climate and ocean biogeochemistry at the present day and at the last glacial maximum. Earth-Science Reviews, 2010, 99, 61-97.	4.0	484
14	Aerosol indirect effects â€" general circulation model intercomparison and evaluation with satellite data. Atmospheric Chemistry and Physics, 2009, 9, 8697-8717.	1.9	418
15	Radiative forcing in the ACCMIP historical and future climate simulations. Atmospheric Chemistry and Physics, 2013, 13, 2939-2974.	1.9	395
16	Reevaluation of Mineral aerosol radiative forcings suggests a better agreement with satellite and AERONET data. Atmospheric Chemistry and Physics, 2007, 7, 81-95.	1.9	393
17	Recent progress in understanding physical and chemical properties of African and Asian mineral dust. Atmospheric Chemistry and Physics, 2011, 11, 8231-8256.	1.9	367
18	The AeroCom evaluation and intercomparison of organic aerosol in global models. Atmospheric Chemistry and Physics, 2014, 14, 10845-10895.	1.9	363

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19	Transport and residence times of tropospheric aerosols inferred from a global threeâ€dimensional simulation of ²¹⁰Pb. Journal of Geophysical Research, 1993, 98, 20573-20586.	3.3	325
20	Transport impacts on atmosphere and climate: Land transport. Atmospheric Environment, 2010, 44, 4772-4816.	1.9	285
21	Evaluation and intercomparison of global atmospheric transport models using222Rn and other short-lived tracers. Journal of Geophysical Research, 1997, 102, 5953-5970.	3.3	267
22	Global modeling of heterogeneous chemistry on mineral aerosol surfaces: Influence on tropospheric ozone chemistry and comparison to observations. Journal of Geophysical Research, 2004, 109, .	3.3	231
23	The effect of harmonized emissions on aerosol properties in global models â€“ an AeroCom experiment. Atmospheric Chemistry and Physics, 2007, 7, 4489-4501.	1.9	228
24	Black carbon vertical profiles strongly affect its radiative forcing uncertainty. Atmospheric Chemistry and Physics, 2013, 13, 2423-2434.	1.9	223
25	The contribution of Chinaâ€™s emissions to global climate forcing. Nature, 2016, 531, 357-361.	13.7	214
26	Significant contribution of combustion-related emissions to the atmospheric phosphorus budget. Nature Geoscience, 2015, 8, 48-54.	5.4	207
27	Photoenhanced uptake of NO₂ on mineral dust: Laboratory experiments and model simulations. Geophysical Research Letters, 2008, 35, .	1.5	200
28	Long-term measurements of carbonaceous aerosols in the Eastern Mediterranean: evidence of long-range transport of biomass burning. Atmospheric Chemistry and Physics, 2008, 8, 5551-5563.	1.9	170
29	Application of the CALIOP layer product to evaluate the vertical distribution of aerosols estimated by global models: AeroCom phase I results. Journal of Geophysical Research, 2012, 117, .	3.3	170
30	Change in global aerosol composition since preindustrial times. Atmospheric Chemistry and Physics, 2006, 6, 5143-5162.	1.9	168
31	Influence of the source formulation on modeling the atmospheric global distribution of sea salt aerosol. Journal of Geophysical Research, 2001, 106, 27509-27524.	3.3	167
32	A global model simulation of present and future nitrate aerosols and their direct radiative forcing of climate. Atmospheric Chemistry and Physics, 2014, 14, 11031-11063.	1.9	167
33	A new data set of soil mineralogy for dust-cycle modeling. Atmospheric Chemistry and Physics, 2014, 14, 3801-3816.	1.9	166
34	Role of aerosol size distribution and source location in a three-dimensional simulation of a Saharan dust episode tested against satellite-derived optical thickness. Journal of Geophysical Research, 1998, 103, 10579-10592.	3.3	162
35	Global forest carbon uptake due to nitrogen and phosphorus deposition from 1850 to 2100. Global Change Biology, 2017, 23, 4854-4872.	4.2	158
36	Aerosol and ozone changes as forcing for climate evolution between 1850 and 2100. Climate Dynamics, 2013, 40, 2223-2250.	1.7	157

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37	Modelled black carbon radiative forcing and atmospheric lifetime in AeroCom Phase II constrained by aircraft observations. Atmospheric Chemistry and Physics, 2014, 14, 12465-12477.	1.9	157
38	Exposure to ambient black carbon derived from a unique inventory and high-resolution model. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2459-2463.	3.3	148
39	Estimates of global multicomponent aerosol optical depth and direct radiative perturbation in the Laboratoire de MÃ©tÃ©orologie Dynamique general circulation model. Journal of Geophysical Research, 2005, 110, .	3.3	144
40	Radiative forcing of climate by ice-age atmospheric dust. Climate Dynamics, 2003, 20, 193-202.	1.7	142
41	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
42	Contribution of the world's main dust source regions to the global cycle of desert dust. Atmospheric Chemistry and Physics, 2021, 21, 8169-8193.	1.9	126
43	Aerosol-ozone correlations during dust transport episodes. Atmospheric Chemistry and Physics, 2004, 4, 1201-1215.	1.9	123
44	Ice-free glacial northern Asia due to dust deposition on snow. Climate Dynamics, 2006, 27, 613-625.	1.7	117
45	Trend in Global Black Carbon Emissions from 1960 to 2007. Environmental Science & Technology, 2014, 48, 6780-6787.	4.6	114
46	A comparison of scavenging and deposition processes in global models: results from the WCRP Cambridge Workshop of 1995. Tellus, Series B: Chemical and Physical Meteorology, 2000, 52, 1025-1056.	0.8	113
47	Uncertainties in assessing radiative forcing by mineral dust. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 491.	0.8	111
48	Complex refractive indices and single-scattering albedo of global dust aerosols in the shortwave spectrum and relationship to size and iron content. Atmospheric Chemistry and Physics, 2019, 19, 15503-15531.	1.9	108
49	Uncertainties in assessing radiative forcing by mineral dust. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 491-505.	0.8	101
50	Three-dimensional transport and concentration of SF6. A model intercomparison study (TransCom 2). Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 266-297.	0.8	101
51	AeroCom phase III multi-model evaluation of the aerosol life cycle and optical properties using ground- and space-based remote sensing as well as surface in situ observations. Atmospheric Chemistry and Physics, 2021, 21, 87-128.	1.9	96
52	Implementation of the CMIP6 Forcing Data in the IPSLâ€CM6Aâ€LR Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001940.	1.3	95
53	Global scale variability of the mineral dust long-wave refractive index: a new dataset of in situ measurements for climate modeling and remote sensing. Atmospheric Chemistry and Physics, 2017, 17, 1901-1929.	1.9	91
54	Three-dimensional transport and concentration of SF₆ A model intercomparison study (TransCom 2). Tellus, Series B: Chemical and Physical Meteorology, 2022, 51, 266.	0.8	88

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55	An AeroCom assessment of black carbon in Arctic snow and sea ice. Atmospheric Chemistry and Physics, 2014, 14, 2399-2417.	1.9	86
56	Improving the seasonal cycle and interannual variations of biomass burning aerosol sources. Atmospheric Chemistry and Physics, 2003, 3, 1211-1222.	1.9	85
57	Sources, transport and deposition of iron in the global atmosphere. Atmospheric Chemistry and Physics, 2015, 15, 6247-6270.	1.9	85
58	Aerosol optical depths and direct radiative perturbations by species and source type. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	82
59	Snow cover sensitivity to black carbon deposition in the Himalayas: from atmospheric and ice core measurements to regional climate simulations. Atmospheric Chemistry and Physics, 2014, 14, 4237-4249.	1.9	80
60	Evaluation of the aerosol vertical distribution in global aerosol models through comparison against CALIOP measurements: AeroCom phase II results. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7254-7283.	1.2	80
61	A comparison of scavenging and deposition processes in global models: results from the WCRP Cambridge Workshop of 1995. Tellus, Series B: Chemical and Physical Meteorology, 2022, 52, 1025.	0.8	78
62	Direct radiative effect of aerosols emitted by transport: from road, shipping and aviation. Atmospheric Chemistry and Physics, 2010, 10, 4477-4489.	1.9	78
63	Sea-salt aerosol source functions and emissions. Advances in Global Change Research, 2004, , 333-359.	1.6	78
64	Evaluation of observed and modelled aerosol lifetimes using radioactive tracers of opportunity and an ensemble of 19 global models. Atmospheric Chemistry and Physics, 2016, 16, 3525-3561.	1.9	75
65	Global carbon emissions from biomass burning in the 20th century. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	72
66	Wet deposition in a global size-dependent aerosol transport model: 1. Comparison of a 1 year210Pb simulation with ground measurements. Journal of Geophysical Research, 1998, 103, 11429-11445.	3.3	71
67	Estimation of global black carbon direct radiative forcing and its uncertainty constrained by observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5948-5971.	1.2	66
68	Spectral- and size-resolved mass absorption efficiency of mineral dust aerosols in the shortwave spectrum: a simulation chamber study. Atmospheric Chemistry and Physics, 2017, 17, 7175-7191.	1.9	66
69	Improved representation of the global dust cycle using observational constraints on dust properties and abundance. Atmospheric Chemistry and Physics, 2021, 21, 8127-8167.	1.9	65
70	Assimilation of POLDER aerosol optical thickness into the LMDz-INCA model: Implications for the Arctic aerosol burden. Journal of Geophysical Research, 2007, 112, .	3.3	64
71	Monthly-averaged anthropogenic aerosol direct radiative forcing over the Mediterranean based on AERONET aerosol properties. Atmospheric Chemistry and Physics, 2008, 8, 6995-7014.	1.9	64
72	Distribution of222Rn over the north Pacific: Implications for continental influences. Journal of Atmospheric Chemistry, 1992, 14, 353-374.	1.4	63

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73	Intercomparison of radiative forcing calculations of stratospheric water vapour and contrails. Meteorologische Zeitschrift, 2009, 18, 585-596.	0.5	63
74	Imprint of North-Atlantic abrupt climate changes on western European loess deposits as viewed in a dust emission model. Quaternary Science Reviews, 2009, 28, 2851-2866.	1.4	61
75	Soot microphysical effects on liquid clouds, a multi-model investigation. Atmospheric Chemistry and Physics, 2011, 11, 1051-1064.	1.9	58
76	Aerosols at the poles: an AeroCom Phase II multi-model evaluation. Atmospheric Chemistry and Physics, 2017, 17, 12197-12218.	1.9	58
77	Spatially explicit analysis identifies significant potential for bioenergy with carbon capture and storage in China. Nature Communications, 2021, 12, 3159.	5.8	58
78	Wildfires in northern Eurasia affect the budget of black carbon in the Arctic â€" a 12-year retrospective synopsis (2002â€"2013). Atmospheric Chemistry and Physics, 2016, 16, 7587-7604.	1.9	56
79	Wet deposition in a global size-dependent aerosol transport model: 2. Influence of the scavenging scheme on210Pb vertical profiles, surface concentrations, and deposition. Journal of Geophysical Research, 1998, 103, 28875-28891.	3.3	55
80	Resuspension and atmospheric transport of radionuclides due to wildfires near the Chernobyl Nuclear Power Plant in 2015: An impact assessment. Scientific Reports, 2016, 6, 26062.	1.6	54
81	Modeling the biogeochemical impact of atmospheric phosphate deposition from desert dust and combustion sources to the Mediterranean Sea. Biogeosciences, 2018, 15, 2499-2524.	1.3	49
82	Direct Radiative Effect by Mineral Dust Aerosols Constrained by New Microphysical and Spectral Optical Data. Geophysical Research Letters, 2020, 47, e2019GL086186.	1.5	49
83	Retrieving the effective radius of Saharan dust coarse mode from AIRS. Geophysical Research Letters, 2005, 32, .	1.5	47
84	Quantifying the range of the dust direct radiative effect due to source mineralogy uncertainty. Atmospheric Chemistry and Physics, 2021, 21, 3973-4005.	1.9	47
85	Modeling dust emission response to North Atlantic millennial-scale climate variations from the perspective of East European MIS 3 loess deposits. Climate of the Past, 2013, 9, 1385-1402.	1.3	46
86	Modeling the impacts of atmospheric deposition of nitrogen and desert dust-derived phosphorus on nutrients and biological budgets of the Mediterranean Sea. Progress in Oceanography, 2018, 163, 21-39.	1.5	46
87	ESD Reviews: Climate feedbacks in the Earth system and prospects for their evaluation. Earth System Dynamics, 2019, 10, 379-452.	2.7	46
88	Reconstructing the Chernobyl Nuclear Power Plant (CNPP) accident 30 years after. A unique database of air concentration and deposition measurements over Europe. Environmental Pollution, 2016, 216, 408-418.	3.7	45
89	Jury is still out on the radiative forcing by black carbon. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5092-3.	3.3	43
90	Ocean primary production derived from satellite data: An evaluation with atmospheric oxygen measurements. Global Biogeochemical Cycles, 1999, 13, 257-271.	1.9	42

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91	Modeling the climate impact of road transport, maritime shipping and aviation over the period 1860â€“2100 with an AOGCM. Atmospheric Chemistry and Physics, 2012, 12, 1449-1480.	1.9	41
92	Wildfires in Chernobyl-contaminated forests and risks to the population and the environment: A new nuclear disaster about to happen?. Environment International, 2014, 73, 346-358.	4.8	41
93	Fire evolution in the radioactive forests of Ukraine and Belarus: future risks for the population and the environment. Ecological Monographs, 2015, 85, 49-72.	2.4	41
94	Influence of anthropogenic aerosol deposition on the relationship between oceanic productivity and warming. Geophysical Research Letters, 2015, 42, 10745-10754.	1.5	40
95	Sensitivity of direct radiative forcing by mineral dust to particle characteristics. Progress in Physical Geography, 2009, 33, 80-102.	1.4	39
96	Global and local cancer risks after the Fukushima Nuclear Power Plant accident as seen from Chernobyl: A modeling study for radiocaesium (134Cs & 137Cs). Environment International, 2014, 64, 17-27.	4.8	39
97	European glacial dust deposits: Geochemical constraints on atmospheric dust cycle modeling. Geophysical Research Letters, 2014, 41, 7666-7674.	1.5	38
98	Global Transport and Deposition of ¹³⁷Cs Following the Fukushima Nuclear Power Plant Accident in Japan: Emphasis on Europe and Asia Using Highâ€“Resolution Model Versions and Radiological Impact Assessment of the Human Population and the Environment Using Interactive Tools. Environmental Science & Technology, 2013, 47, 5803-5812.	4.6	37
99	Transport of continental air to the subantarctic Indian Ocean. Tellus, Series B: Chemical and Physical Meteorology, 2022, 42, 62.	0.8	34
100	Simulations of the transport and deposition of ¹³⁷Cs over Europe after the Chernobyl Nuclear Power Plant accident: influence of varying emission-altitude and model horizontal and vertical resolution. Atmospheric Chemistry and Physics, 2013, 13, 7183-7198.	1.9	33
101	Short-lived climate forcers have long-term climate impacts via the carbonâ€“climate feedback. Nature Climate Change, 2020, 10, 851-855.	8.1	31
102	Global Emissions of Mineral Aerosol: Formulation and Validation using Satellite Imagery. Advances in Global Change Research, 2004, , 239-267.	1.6	30
103	A new method for evaluating the impact of vertical distribution on aerosol radiative forcing in general circulation models. Atmospheric Chemistry and Physics, 2014, 14, 877-897.	1.9	29
104	Interaction of mineral dust with gas phase nitric acid and sulfur dioxide during the MINATROC II field campaign: First estimate of the uptake coefficient Î³HNO3from atmospheric data. Journal of Geophysical Research, 2005, 110, .	3.3	28
105	Increased Global Land Carbon Sink Due to Aerosolâ€Induced Cooling. Global Biogeochemical Cycles, 2019, 33, 439-457.	1.9	27
106	Daily black carbon emissions from fires in northern Eurasia for 2002â€“2015. Geoscientific Model Development, 2016, 9, 4461-4474.	1.3	27
107	Boreal and temperate snow cover variations induced by black carbon emissions in the middle of the 21st century. Cryosphere, 2013, 7, 537-554.	1.5	25
108	Daily CO2 Emission Reduction Indicates the Control of Activities to Contain COVID-19 in China. Innovation(China), 2020, 1, 100062.	5.2	25

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109	Aerosol-Climate Interactions During the Last Glacial Maximum. Current Climate Change Reports, 2018, 4, 99-114.	2.8	24
110	Modelling the direct effect of aerosols in the solar near-infrared on a planetary scale. Atmospheric Chemistry and Physics, 2007, 7, 3211-3229.	1.9	23
111	Radiative forcing estimates of sulfate aerosol in coupled climate-chemistry models with emphasis on the role of the temporal variability. Atmospheric Chemistry and Physics, 2012, 12, 5583-5602.	1.9	22
112	Inverse modeling of the Chernobyl source term using atmospheric concentration and deposition measurements. Atmospheric Chemistry and Physics, 2017, 17, 8805-8824.	1.9	22
113	10-year satellite-constrained fluxes of ammonia improve performance of chemistry transport models. Atmospheric Chemistry and Physics, 2021, 21, 4431-4451.	1.9	21
114	Transport of continental air to the subantarctic Indian Ocean. Tellus, Series B: Chemical and Physical Meteorology, 1990, 42, 62-75.	0.8	20
115	Evaluation of natural aerosols in CRESCENDO Earth system models (ESMs): mineral dust. Atmospheric Chemistry and Physics, 2021, 21, 10295-10335.	1.9	20
116	Sulfur and nitrogen levels in the North Atlantic Ocean's atmosphere: A synthesis of field and modeling results. Global Biogeochemical Cycles, 1992, 6, 77-100.	1.9	19
117	Spatial Representativeness Error in the Groundâ€Level Observation Networks for Black Carbon Radiation Absorption. Geophysical Research Letters, 2018, 45, 2106-2114.	1.5	18
118	Simulating CH₄ and CO₂ over South and East Asia using the zoomed chemistry transport model LMDz-INCA. Atmospheric Chemistry and Physics, 2018, 18, 9475-9497.	1.9	18
119	Corrigendum to "Evaluation of black carbon estimations in global aerosol models" published in Atmos. Chem. Phys., 9, 9001-9026, 2009. Atmospheric Chemistry and Physics, 2010, 10, 79-81.	1.9	17
120	Impact of Multiscale Variability on Last 6,000 Years Indian and West African Monsoon Rain. Geophysical Research Letters, 2019, 46, 14021-14029.	1.5	16
121	Predicting the effect of confinement on the COVID-19 spread using machine learning enriched with satellite air pollution observations. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	16
122	The contributions of individual countries and regions to the global radiative forcing. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	15
123	Importance of the Source Term and of the Size Distribution to Model the Mineral Dust Cycle. Environmental Science and Technology Library, 1996, , 69-76.	0.1	14
124	Influence of two atmospheric transport models on inferring sources and sinks of atmospheric CO2. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 568-582.	0.8	12
125	How â€œluckyâ€• we are that the Fukushima disaster occurred in early spring. Science of the Total Environment, 2014, 500-501, 155-172.	3.9	11
126	Influence of two atmospheric transport models on inf erring sources and sinks of atmospheric CO2. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 568-582.	0.8	10

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127	Global deposition and transport efficiencies of radioactive species with respect to modelling credibility after Fukushima (Japan, 2011). Journal of Environmental Radioactivity, 2015, 149, 164-175.	0.9	10
128	Missed atmospheric organic phosphorus emitted by terrestrial plants, part 2: Experiment of volatile phosphorus. Environmental Pollution, 2020, 258, 113728.	3.7	10
129	Impact of dust in PMIP-CMIP6 mid-Holocene simulations with the IPSL model. Climate of the Past, 2021, 17, 1091-1117.	1.3	10
130	Better representation of dust can improve climate models with too weak an African monsoon. Atmospheric Chemistry and Physics, 2021, 21, 11423-11435.	1.9	10
131	Cloudy-sky contributions to the direct aerosol effect. Atmospheric Chemistry and Physics, 2020, 20, 8855-8865.	1.9	8
132	Modelling the mineralogical composition and solubility of mineral dust in the Mediterranean area with CHIMERE 2017r4. Geoscientific Model Development, 2020, 13, 2051-2071.	1.3	7
133	Wetter environment and increased grazing reduced the area burned in northern Eurasia from 2002 to 2016. Biogeosciences, 2021, 18, 2559-2572.	1.3	7
134	Climate model calculations of the impact of aerosols from road transport and shipping. Atmospheric and Oceanic Optics, 2012, 25, 62-70.	0.6	6
135	Photoenhanced Uptake of NO2 on Mineral Dust. NATO Science Series Series IV, Earth and Environmental Sciences, 2007, , 219-233.	0.3	6
136	Mortality induced by PM2.5 exposure following the 1783 Laki eruption using reconstructed meteorological fields. Scientific Reports, 2018, 8, 15896.	1.6	4
137	A modeling study of the shortwave and longwave forcing by dust aerosols. Journal of Aerosol Science, 1997, 28, S447-S448.	1.8	2
138	Analysis of slight precipitation in China during the past decades and its relationship with advanced very high radiometric resolution normalized difference vegetation index. International Journal of Climatology, 2018, 38, 5563-5575.	1.5	2
139	Global simulation of the mineral aerosol distribution and its effect on the radiation balance. Journal of Aerosol Science, 1997, 28, S691-S692.	1.8	0