

Ken Carslaw

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

275
papers

21,095
citations

76
h-index

140
g-index

353
ext. papers

24,523
ext. citations

9.8
avg, IF

6.37
L-index

#	Paper	IF	Citations
275	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. <i>Nature</i> , 2011 , 476, 429-33	50.4	863
274	Large contribution of natural aerosols to uncertainty in indirect forcing. <i>Nature</i> , 2013 , 503, 67-71	50.4	614
273	Atmospheric composition change [g]lobal and regional air quality. <i>Atmospheric Environment</i> , 2009 , 43, 5268-5350	5.3	592
272	Molecular understanding of sulphuric acid-amine particle nucleation in the atmosphere. <i>Nature</i> , 2013 , 502, 359-63	50.4	585
271	Impact of nucleation on global CCN. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 8601-8616	6.8	568
270	Particulate matter, air quality and climate: lessons learned and future needs. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 8217-8299	6.8	462
269	The importance of feldspar for ice nucleation by mineral dust in mixed-phase clouds. <i>Nature</i> , 2013 , 498, 355-8	50.4	446
268	Cosmic rays, clouds, and climate. <i>Science</i> , 2002 , 298, 1732-7	33.3	415
267	A review of natural aerosol interactions and feedbacks within the Earth system. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 1701-1737	6.8	409
266	The role of low-volatility organic compounds in initial particle growth in the atmosphere. <i>Nature</i> , 2016 , 533, 527-31	50.4	388
265	Ion-induced nucleation of pure biogenic particles. <i>Nature</i> , 2016 , 533, 521-6	50.4	377
264	Oxidation products of biogenic emissions contribute to nucleation of atmospheric particles. <i>Science</i> , 2014 , 344, 717-21	33.3	375
263	Aerosol mass spectrometer constraint on the global secondary organic aerosol budget. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 12109-12136	6.8	349
262	A marine biogenic source of atmospheric ice-nucleating particles. <i>Nature</i> , 2015 , 525, 234-8	50.4	348
261	Contribution of particle formation to global cloud condensation nuclei concentrations. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	347
260	Evidence for the role of organics in aerosol particle formation under atmospheric conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 6646-51	11.5	341
259	Description and evaluation of GLOMAP-mode: a modal global aerosol microphysics model for the UKCA composition-climate model. <i>Geoscientific Model Development</i> , 2010 , 3, 519-551	6.3	320

258	Improving our fundamental understanding of the role of aerosol-cloud interactions in the climate system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5781-90	11.5	314
257	The contribution of boundary layer nucleation events to total particle concentrations on regional and global scales. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 5631-5648	6.8	299
256	Stratospheric aerosol growth and HNO ₃ gas phase depletion from coupled HNO ₃ and water uptake by liquid particles. <i>Geophysical Research Letters</i> , 1994 , 21, 2479-2482	4.9	289
255	The AeroCom evaluation and intercomparison of organic aerosol in global models. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 10845-10895	6.8	280
254	Ion-aerosol-cloud processes in the lower atmosphere. <i>Reviews of Geophysics</i> , 2003 , 41,	23.1	259
253	The detection of large HNO ₃ -containing particles in the winter Arctic stratosphere. <i>Science</i> , 2001 , 291, 1026-31	33.3	251
252	Molecular understanding of atmospheric particle formation from sulfuric acid and large oxidized organic molecules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 17223-8	11.5	249
251	A Thermodynamic Model of the System HCl-HNO ₃ -H ₂ SO ₄ -H ₂ O, Including Solubilities of HBr, from . <i>The Journal of Physical Chemistry</i> , 1995 , 99, 11557-11574		248
250	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) Integrating aerosol research from nano to global scales. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 13061-13143	6.8	231
249	An analytic expression for the composition of aqueous HNO ₃ -H ₂ SO ₄ stratospheric aerosols including gas phase removal of HNO ₃ . <i>Geophysical Research Letters</i> , 1995 , 22, 1877-1880	4.9	231
248	A global off-line model of size-resolved aerosol microphysics: I. Model development and prediction of aerosol properties. <i>Atmospheric Chemistry and Physics</i> , 2005 , 5, 2227-2252	6.8	224
247	UKESM1: Description and Evaluation of the U.K. Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 4513-4558	7.1	213
246	The Met Office Unified Model Global Atmosphere 7.0/7.1 and JULES Global Land 7.0 configurations. <i>Geoscientific Model Development</i> , 2019 , 12, 1909-1963	6.3	211
245	Global atmospheric particle formation from CERN CLOUD measurements. <i>Science</i> , 2016 , 354, 1119-1124	33.3	207
244	Impacts on iron solubility in the mineral dust by processes in the source region and the atmosphere: A review. <i>Aeolian Research</i> , 2012 , 5, 21-42	3.9	180
243	Arctic ozone loss due to denitrification. <i>Science</i> , 1999 , 283, 2064-9	33.3	178
242	The magnitude and causes of uncertainty in global model simulations of cloud condensation nuclei. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 8879-8914	6.8	172
241	Introduction: European Integrated Project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) Integrating aerosol research from nano to global scales. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 2825-2841	6.8	170

240	Increased stratospheric ozone depletion due to mountain-induced atmospheric waves. <i>Nature</i> , 1998 , 391, 675-678	50.4	170
239	Explaining global surface aerosol number concentrations in terms of primary emissions and particle formation. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 4775-4793	6.8	167
238	Boreal forests, aerosols and the impacts on clouds and climate. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008 , 366, 4613-26	3	166
237	Bounding Global Aerosol Radiative Forcing of Climate Change. <i>Reviews of Geophysics</i> , 2020 , 58, e2019RG000660	19.1	165
236	Global cloud condensation nuclei influenced by carbonaceous combustion aerosol. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 9067-9087	6.8	164
235	Neutral molecular cluster formation of sulfuric acid-dimethylamine observed in real time under atmospheric conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 15019-24	11.5	155
234	The scavenging processes controlling the seasonal cycle in Arctic sulphate and black carbon aerosol. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 6775-6798	6.8	150
233	The direct and indirect radiative effects of biogenic secondary organic aerosol. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 447-470	6.8	146
232	Influence of oceanic dimethyl sulfide emissions on cloud condensation nuclei concentrations and seasonality over the remote Southern Hemisphere oceans: A global model study. <i>Journal of Geophysical Research</i> , 2008 , 113,		137
231	Strong constraints on aerosol-cloud interactions from volcanic eruptions. <i>Nature</i> , 2017 , 546, 485-491	50.4	133
230	Particle microphysics and chemistry in remotely observed mountain polar stratospheric clouds. <i>Journal of Geophysical Research</i> , 1998 , 103, 5785-5796		132
229	Size-dependent stratospheric droplet composition in Lee wave temperature fluctuations and their potential role in PSC freezing. <i>Geophysical Research Letters</i> , 1995 , 22, 3031-3034	4.9	132
228	Natural aerosol direct and indirect radiative effects. <i>Geophysical Research Letters</i> , 2013 , 40, 3297-3301	4.9	127
227	Modeling the composition of liquid stratospheric aerosols. <i>Reviews of Geophysics</i> , 1997 , 35, 125-154	23.1	123
226	Causes and importance of new particle formation in the present-day and preindustrial atmospheres. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 8739-8760	4.4	119
225	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 4679-4713	6.8	114
224	Globally significant oceanic source of organic carbon aerosol. <i>Geophysical Research Letters</i> , 2008 , 35, n/a-n/a	4.9	110
223	Contribution of feldspar and marine organic aerosols to global ice nucleating particle concentrations. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 3637-3658	6.8	107

222	The 1997 Arctic Ozone depletion quantified from three-dimensional model simulations. <i>Geophysical Research Letters</i> , 1998 , 25, 2425-2428	4.9	107
221	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. <i>Science Advances</i> , 2018 , 4, eaau5363	14.3	105
220	Emulation of a complex global aerosol model to quantify sensitivity to uncertain parameters. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 12253-12273	6.8	104
219	vapour pressures of H ₂ SO ₄ /HNO ₃ /HCl/HBr/H ₂ O solutions to low stratospheric temperatures. <i>Geophysical Research Letters</i> , 1995 , 22, 247-250	4.9	102
218	Importance of tropospheric volcanic aerosol for indirect radiative forcing of climate. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 7321-7339	6.8	101
217	Iron dissolution kinetics of mineral dust at low pH during simulated atmospheric processing. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 995-1007	6.8	100
216	Strong control of Southern Ocean cloud reflectivity by ice-nucleating particles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 2687-2692	11.5	99
215	A global off-line model of size-resolved aerosol microphysics: II. Identification of key uncertainties. <i>Atmospheric Chemistry and Physics</i> , 2005 , 5, 3233-3250	6.8	98
214	Primary versus secondary contributions to particle number concentrations in the European boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 12007-12036	6.8	95
213	Occurrence of pristine aerosol environments on a polluted planet. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 18466-71	11.5	90
212	The effect of acid-base clustering and ions on the growth of atmospheric nano-particles. <i>Nature Communications</i> , 2016 , 7, 11594	17.4	88
211	The impact of dust on sulfate aerosol, CN and CCN during an East Asian dust storm. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 365-382	6.8	86
210	Impact of the modal aerosol scheme GLOMAP-mode on aerosol forcing in the Hadley Centre Global Environmental Model. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 3027-3044	6.8	84
209	Intercomparison of modal and sectional aerosol microphysics representations within the same 3-D global chemical transport model. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 4449-4476	6.8	83
208	Selective environmental stress from sulphur emitted by continental flood basalt eruptions. <i>Nature Geoscience</i> , 2016 , 9, 77-82	18.3	82
207	Low sensitivity of cloud condensation nuclei to changes in the sea-air flux of dimethyl-sulphide. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 7545-7559	6.8	82
206	Effect of ions on sulfuric acid-water binary particle formation: 2. Experimental data and comparison with QC-normalized classical nucleation theory. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 1752-1775	4.4	80
205	Reduced anthropogenic aerosol radiative forcing caused by biogenic new particle formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 12053-12058	11.5	79

204	Excess mortality in Europe following a future Laki-style Icelandic eruption. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 15710-5	11.5	78
203	Results from the CERN pilot CLOUD experiment. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 1635-1647	6.8	78
202	Influence of chemical weathering and aging of iron oxides on the potential iron solubility of Saharan dust during simulated atmospheric processing. <i>Global Biogeochemical Cycles</i> , 2011 , 25, n/a-n/a	5.9	77
201	Vertical transport and processing of aerosols in a mixed-phase convective cloud and the feedback on cloud development. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2005 , 131, 221-245	6.4	76
200	An overview of the SOLVE/THESEO 2000 campaign. <i>Journal of Geophysical Research</i> , 2002 , 107, SOL 1-1		76
199	The mass and number size distributions of black carbon aerosol over Europe. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 4917-4939	6.8	75
198	An AeroCom assessment of black carbon in Arctic snow and sea ice. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 2399-2417	6.8	71
197	Impact of BrO on dimethylsulfide in the remote marine boundary layer. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	68
196	Regional and global trends in sulfate aerosol since the 1980s. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	68
195	Ultrathin Tropical Tropopause Clouds (UTTCS): I. Cloud morphology and occurrence. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 1083-1091	6.8	68
194	The complex response of Arctic aerosol to sea-ice retreat. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 7543-7557	6.8	67
193	Mapping the uncertainty in global CCN using emulation. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 9739-9751	6.8	67
192	Aerosols in the Pre-industrial Atmosphere. <i>Current Climate Change Reports</i> , 2017 , 3, 1-15	9	65
191	Sensitivity of cloud condensation nuclei to regional changes in dimethyl-sulphide emissions. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 2723-2733	6.8	65
190	A global model study of processes controlling aerosol size distributions in the Arctic spring and summer. <i>Journal of Geophysical Research</i> , 2008 , 113,		64
189	A vortex-scale simulation of the growth and sedimentation of large nitric acid hydrate particles. <i>Journal of Geophysical Research</i> , 2002 , 107, SOL 43-1		64
188	Tropospheric aerosol microphysics simulation with assimilated meteorology: model description and intermodel comparison. <i>Atmospheric Chemistry and Physics</i> , 2008 , 8, 3149-3168	6.8	63
187	Widespread solid particle formation by mountain waves in the Arctic stratosphere. <i>Journal of Geophysical Research</i> , 1999 , 104, 1827-1836		63

186	Aerosol climate feedback due to decadal increases in Southern Hemisphere wind speeds. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	59
185	The relationship between aerosol and cloud drop number concentrations in a global aerosol microphysics model. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 4131-4144	6.8	59
184	Melting of H ₂ SO ₄ ·4H ₂ O Particles upon Cooling: Implications for Polar Stratospheric Clouds. <i>Science</i> , 1996 , 272, 1638-41	33.3	59
183	Aerosol and physical atmosphere model parameters are both important sources of uncertainty in aerosol ERF. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 9975-10006	6.8	57
182	Enhancement of marine cloud albedo via controlled sea spray injections: a global model study of the influence of emission rates, microphysics and transport. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 4133-4143	6.8	56
181	Effects of boundary layer particle formation on cloud droplet number and changes in cloud albedo from 1850 to 2000. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 695-705	6.8	56
180	Ozone loss rates in the Arctic stratosphere in the winter 1991/92: Model calculations compared with match results. <i>Geophysical Research Letters</i> , 1998 , 25, 4325-4328	4.9	56
179	Impact on short-lived climate forcers increases projected warming due to deforestation. <i>Nature Communications</i> , 2018 , 9, 157	17.4	54
178	The impact of the 1783-1784 AD Laki eruption on global aerosol formation processes and cloud condensation nuclei. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 6025-6041	6.8	54
177	Experimental particle formation rates spanning tropospheric sulfuric acid and ammonia abundances, ion production rates, and temperatures. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 12,377	4.4	54
176	On the relationship between aerosol model uncertainty and radiative forcing uncertainty. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5820-7	11.5	53
175	Quantifying sources of inter-model diversity in the cloud albedo effect. <i>Geophysical Research Letters</i> , 2015 , 42, 1568-1575	4.9	53
174	Aircraft lidar observations of an enhanced type Ia polar stratospheric clouds during APE-POLECAT. <i>Journal of Geophysical Research</i> , 1999 , 104, 23961-23969		52
173	Modelled and observed changes in aerosols and surface solar radiation over Europe between 1960 and 2009. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 9477-9500	6.8	51
172	Freezing of polar stratospheric clouds in orographically induced strong warming events. <i>Geophysical Research Letters</i> , 1997 , 24, 2303-2306	4.9	51
171	Aerosol microphysics simulations of the Mt.~Pinatubo eruption with the UM-UKCA composition-climate model. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 11221-11246	6.8	48
170	Nonequilibrium coexistence of solid and liquid particles in Arctic stratospheric clouds. <i>Journal of Geophysical Research</i> , 2001 , 106, 22991-23007		48
169	Solubility of HOCl in water and aqueous H ₂ SO ₄ to stratospheric temperatures. <i>Journal of Atmospheric Chemistry</i> , 1995 , 21, 81-95	3.2	48

168	Reassessment of pre-industrial fire emissions strongly affects anthropogenic aerosol forcing. <i>Nature Communications</i> , 2018 , 9, 3182	17.4	47
167	Evaluating uncertainty in convective cloud microphysics using statistical emulation. <i>Journal of Advances in Modeling Earth Systems</i> , 2015 , 7, 162-187	7.1	47
166	A simple model of global aerosol indirect effects. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 6688-6707	4.4	47
165	Understanding the nature of atmospheric acid processing of mineral dusts in supplying bioavailable phosphorus to the oceans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14639-14644	11.5	47
164	Thermodynamic stability and phase transitions of PSC particles. <i>Geophysical Research Letters</i> , 1997 , 24, 2199-2202	4.9	46
163	Evaluation of a global aerosol microphysics model against size-resolved particle statistics in the marine atmosphere. <i>Atmospheric Chemistry and Physics</i> , 2007 , 7, 2073-2090	6.8	46
162	Detailed modeling of mountain wave PSCs. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 697-712	6.8	46
161	An analysis of large HNO ₃ -containing particles sampled in the Arctic stratosphere during the winter of 1999/2000. <i>Journal of Geophysical Research</i> , 2002 , 107, SOL 41-1		46
160	New approaches to quantifying aerosol influence on the cloud radiative effect. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5812-9	11.5	45
159	A numerical study of aerosol effects on the dynamics and microphysics of a deep convective cloud in a continental environment. <i>Journal of Geophysical Research</i> , 2006 , 111,		45
158	Uncertainties in reactive uptake coefficients for solid stratospheric particles-1. Surface chemistry. <i>Geophysical Research Letters</i> , 1997 , 24, 1743-1746	4.9	44
157	Dehydration potential of ultrathin clouds at the tropical tropopause. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	44
156	The Global Aerosol Synthesis and Science Project (GASSP): Measurements and Modeling to Reduce Uncertainty. <i>Bulletin of the American Meteorological Society</i> , 2017 , 98, 1857-1877	6.1	43
155	Model-guided Lagrangian observation and simulation of mountain polar stratospheric clouds. <i>Journal of Geophysical Research</i> , 1999 , 104, 23971-23981		42
154	Large simulated radiative effects of smoke in the south-east Atlantic. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 15261-15289	6.8	42
153	Uncertainty in the magnitude of aerosol-cloud radiative forcing over recent decades. <i>Geophysical Research Letters</i> , 2014 , 41, 9040-9049	4.9	38
152	Uncertainties in reactive uptake coefficients for solid stratospheric particles ² . Effect on ozone depletion. <i>Geophysical Research Letters</i> , 1997 , 24, 1747-1750	4.9	38
151	A model intercomparison of CCN-limited tenuous clouds in the high Arctic. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 11041-11071	6.8	38

150	Overview of the Antarctic Circumnavigation Expedition: Study of Preindustrial-like Aerosols and Their Climate Effects (ACE-SPACE). <i>Bulletin of the American Meteorological Society</i> , 2019 , 100, 2260-2283 ^{6.1}	35
149	Impact of future Arctic shipping on high-latitude black carbon deposition. <i>Geophysical Research Letters</i> , 2013 , 40, 4459-4463	4.9 34
148	Minor effect of physical size sorting on iron solubility of transported mineral dust. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 8459-8469	6.8 34
147	Mountain Wave-Induced Polar Stratospheric Cloud Forecasts for Aircraft Science Flights during SOLVE/THESEO 2000. <i>Weather and Forecasting</i> , 2006 , 21, 42-68	2.1 34
146	Chlorine activation and ozone destruction in the northern lowermost stratosphere. <i>Journal of Geophysical Research</i> , 1999 , 104, 8201-8213	34
145	Impact of Changes to the Atmospheric Soluble Iron Deposition Flux on Ocean Biogeochemical Cycles in the Anthropocene. <i>Global Biogeochemical Cycles</i> , 2020 , 34, e2019GB006448	5.9 33
144	Experimental investigation of ion-ion recombination under atmospheric conditions. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 7203-7216	6.8 33
143	Modeling the effect of denitrification on Arctic ozone depletion during winter 1999/2000. <i>Journal of Geophysical Research</i> , 2002 , 107, SOL 65-1-SOL 65-18	32
142	Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt. Tambora. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 2307-2328	6.8 31
141	Evaluation of global simulations of aerosol particle and cloud condensation nuclei number, with implications for cloud droplet formation. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 8591-8617	6.8 31
140	A test of our understanding of the ozone chemistry in the Arctic polar vortex based on in situ measurements of ClO, BrO, and O ₃ in the 1994/1995 winter. <i>Journal of Geophysical Research</i> , 1999 , 104, 18755-18768	31
139	Boundary layer nucleation as a source of new CCN in savannah environment. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 1957-1972	6.8 30
138	New Directions: The impact of oceanic iron fertilisation on cloud condensation nuclei. <i>Atmospheric Environment</i> , 2008 , 42, 5728-5730	5.3 30
137	The APE-THESEO Tropical Campaign: An Overview. <i>Journal of Atmospheric Chemistry</i> , 2004 , 48, 1-33	3.2 30
136	Ozone loss rates in the Arctic stratosphere in the winter 1994/1995: Model simulations underestimate results of the Match analysis. <i>Journal of Geophysical Research</i> , 2000 , 105, 15175-15184	30
135	Mesoscale Temperature Fluctuations Induced by a Spectrum of Gravity Waves: A Comparison of Parameterizations and Their Impact on Stratospheric Microphysics. <i>Journals of the Atmospheric Sciences</i> , 1999 , 56, 1913-1924	2.1 30
134	The impact of European legislative and technology measures to reduce air pollutants on air quality, human health and climate. <i>Environmental Research Letters</i> , 2016 , 11, 024010	6.2 30
133	Ice-nucleating ability of aerosol particles and possible sources at three coastal marine sites. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 15669-15685	6.8 29

132	Size-dependent influence of NO on the growth rates of organic aerosol particles. <i>Science Advances</i> , 2020 , 6, eaay4945	14.3	28
131	Impact of gas-to-particle partitioning approaches on the simulated radiative effects of biogenic secondary organic aerosol. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 12989-13001	6.8	28
130	The response of precipitation to aerosol through riming and melting in deep convective clouds. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 3495-3510	6.8	28
129	Modelling the effect of denitrification on polar ozone depletion for Arctic winter 2004/2005. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 6559-6573	6.8	28
128	Collocated observations of cloud condensation nuclei, particle size distributions, and chemical composition. <i>Scientific Data</i> , 2017 , 4, 170003	8.2	27
127	Is Black Carbon an Unimportant Ice-Nucleating Particle in Mixed-Phase Clouds?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 4273-4283	4.4	27
126	Simulation of trace gas redistribution by convective clouds - Liquid phase processes. <i>Atmospheric Chemistry and Physics</i> , 2001 , 1, 19-36	6.8	27
125	Description and evaluation of aerosol in UKESM1 and HadGEM3-GC3.1 CMIP6 historical simulations. <i>Geoscientific Model Development</i> , 2020 , 13, 6383-6423	6.3	27
124	Opinion: Cloud-phase climate feedback and the importance of ice-nucleating particles. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 665-679	6.8	27
123	Atmospheric physics: Cosmic rays, clouds and climate. <i>Nature</i> , 2009 , 460, 332-3	50.4	26
122	The magnitude and sources of uncertainty in global aerosol. <i>Faraday Discussions</i> , 2013 , 165, 495-512	3.6	25
121	Factors controlling Arctic denitrification in cold winters of the 1990s. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 403-416	6.8	25
120	Large nitric acid trihydrate particles and denitrification caused by mountain waves in the Arctic stratosphere. <i>Journal of Geophysical Research</i> , 2005 , 110,		24
119	Redistribution of trace gases by convective clouds - mixed-phase processes. <i>Atmospheric Chemistry and Physics</i> , 2002 , 2, 293-306	6.8	24
118	The development of ice in a cumulus cloud over southwest England. <i>New Journal of Physics</i> , 2008 , 10, 105021	2.9	23
117	Ultrathin Tropical Tropopause Clouds (UTTCS): II. Stabilization mechanisms. <i>Atmospheric Chemistry and Physics</i> , 2003 , 3, 1093-1100	6.8	23
116	The CLOUD Aerosol Radiation Interaction and Forcing: Year 2017 (CLARIFY-2017) measurement campaign. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 1049-1084	6.8	22
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26	Global cloud condensation nuclei influenced by carbonaceous combustion aerosol		2
25	Mapping the uncertainty in global CCN using emulation		2

24	The scavenging processes controlling the seasonal cycle in Arctic sulphate and black carbon aerosol	2
23	Intercomparison and evaluation of aerosol microphysical properties among AeroCom global models of a range of complexity	2
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