Markus Rex

List of Publications by Year
in descending order

91 papers	5,288 citations	81839 39 h-index	95218 68 g-index
100 all docs	100 docs citations	100 times ranked	3959 citing authors

#	Article	IF	Citations
1	Overview of the MOSAiC expedition: Physical oceanography. Elementa, 2022, 10, .	1.1	54
2	Overview of the MOSAiC expedition: Atmosphere. Elementa, 2022, 10, .	1.1	121
3	Overview of the MOSAiC expedition: Snow and sea ice. Elementa, 2022, 10, .	1.1	91
4	Arctic sea ice anomalies during the MOSAiC winter 2019/20. Cryosphere, 2022, 16, 981-1005.	1.5	7
5	Improved Circulation in the Northern Hemisphere by Adjusting Gravity Wave Drag Parameterizations in Seasonal Experiments With ICONâ€NWP. Earth and Space Science, 2021, 8, e2021EA001676.	1.1	4
6	Climate change favours large seasonal loss of Arctic ozone. Nature Communications, 2021, 12, 3886.	5.8	44
7	Nearâ€Complete Local Reduction of Arctic Stratospheric Ozone by Severe Chemical Loss in Spring 2020. Geophysical Research Letters, 2020, 47, e2020GL089547.	1.5	75
8	The MOSAiC ice floe: sediment-laden survivor from the Siberian shelf. Cryosphere, 2020, 14, 2173-2187.	1.5	59
9	Ammonium nitrate particles formed in upper troposphere from ground ammonia sources during Asian monsoons. Nature Geoscience, 2019, 12, 608-612.	5.4	95
10	Stratospheric ozone loss in the Arctic winters between 2005 and 2013 derived with ACE-FTS measurements. Atmospheric Chemistry and Physics, 2019, 19, 577-601.	1.9	10
11	The role of stratospheric ozone for Arctic-midlatitude linkages. Scientific Reports, 2019, 9, 7962.	1.6	28
12	A Lagrangian convective transport scheme including a simulation of the time air parcels spend in updrafts (LaConTra v1.0). Geoscientific Model Development, 2019, 12, 4387-4407.	1.3	7
13	The Atmosphere Above Ny-Ã…lesund: Climate and Global Warming, Ozone and Surface UV Radiation. Advances in Polar Ecology, 2019, , 23-46.	1.3	13
14	Balloon-borne measurements of temperature, water vapor, ozone and aerosol backscatter on the southern slopes of the Himalayas during StratoClim 2016â€“2017. Atmospheric Chemistry and Physics, 2018, 18, 15937-15957.	1.9	69
15	The Extrapolar SWIFT model (version 1.0): fast stratospheric ozone chemistry for global climate models. Geoscientific Model Development, 2018, 11, 753-769.	1.3	3
16	The Quadrennial Ozone Symposium 2016. Advances in Atmospheric Sciences, 2017, 34, 283-288.	1.9	2
17	A quantitative analysis of the reactions involved in stratospheric ozone depletion in the polar vortex core. Atmospheric Chemistry and Physics, 2017, 17, 10535-10563.	1.9	17
18	Update of the Polar SWIFT model for polar stratospheric ozone loss (Polar SWIFT versionÂ2). Geoscientific Model Development, 2017, 10, 2671-2689.	1.3	8

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19	Stratospheric aerosol-Observations, processes, and impact on climate. Reviews of Geophysics, 2016, 54, 278-335.	9.0	265
20	Polar stratospheric cloud evolution and chlorine activation measured by CALIPSO and MLS, and modeled by ATLAS. Atmospheric Chemistry and Physics, 2016, 16, 3311-3325.	1.9	15
21	First quasi-Lagrangian in situ measurements of Antarctic Polar springtime ozone: observed ozone loss rates from the Concordiasi long-duration balloon campaign. Atmospheric Chemistry and Physics, 2015, 15, 2463-2472.	1.9	4
22	A tropical West Pacific OH minimum and implications for stratospheric composition. Atmospheric Chemistry and Physics, 2014, 14, 4827-4841.	1.9	60
23	Technical Note: SWIFT â€“ a fast semi-empirical model for polar stratospheric ozone loss. Atmospheric Chemistry and Physics, 2014, 14, 6545-6555.	1.9	4
24	The link between springtime total ozone and summer UV radiation in Northern Hemisphere extratropics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8649-8661.	1.2	16
25	The spring 2011 final stratospheric warming above Eureka: anomalous dynamics and chemistry. Atmospheric Chemistry and Physics, 2013, 13, 611-624.	1.9	13
26	Uncertainties in modelling heterogeneous chemistry and Arctic ozone depletion in the winter 2009/2010. Atmospheric Chemistry and Physics, 2013, 13, 3909-3929.	1.9	45
27	Semi-empirical models for chlorine activation and ozone depletion in the Antarctic stratosphere: proof of concept. Atmospheric Chemistry and Physics, 2013, 13, 3237-3243.	1.9	3
28	Reconciliation of essential process parameters for an enhanced predictability of Arctic stratospheric ozone loss and its climate interactions (RECONCILE): activities and results. Atmospheric Chemistry and Physics, 2013, 13, 9233-9268.	1.9	88
29	ClOOCl photolysis at high solar zenith angles: analysis of the RECONCILE self-match flight. Atmospheric Chemistry and Physics, 2012, 12, 1353-1365.	1.9	32
30	Persistence of ozone anomalies in the Arctic stratospheric vortex in autumn. Atmospheric Chemistry and Physics, 2012, 12, 4817-4823.	1.9	5
31	Influence of transport and mixing in autumn on stratospheric ozone variability over the Arctic in early winter. Atmospheric Chemistry and Physics, 2012, 12, 7921-7930.	1.9	0
32	Ship-borne FTIR measurements of CO and O₃ in the Western Pacific from 43Â° N to 35Â° S: an evaluation of the sources. Atmospheric Chemistry and Physics, 2012, 12, 815-828.	1.9	19
33	State of the Climate in 2011. Bulletin of the American Meteorological Society, 2012, 93, S1-S282.	1.7	121
34	Severe 2011 ozone depletion assessed with 11 years of ozone, NO₂, and OClO measurements at 80Â°N. Geophysical Research Letters, 2012, 39, .	1.5	30
35	Unprecedented Arctic ozone loss in 2011. Nature, 2011, 478, 469-475.	13.7	572
36	Sensitivity of stratospheric Br_y to uncertainties in very short lived substance emissions and atmospheric transport. Atmospheric Chemistry and Physics, 2011, 11, 1379-1392.	1.9	27

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37	Retrievals of chlorine chemistry kinetic parameters from Antarctic ClO microwave radiometer measurements. Atmospheric Chemistry and Physics, 2011, 11, 5183-5193.	1.9	12
38	Ozone Loss in the Polar Stratosphere. , 2011, , 145-168.		1
39	A closer look at Arctic ozone loss and polar stratospheric clouds. Atmospheric Chemistry and Physics, 2010, 10, 8499-8510.	1.9	50
40	The Lagrangian chemistry and transport model ATLAS: simulation and validation of stratospheric chemistry and ozone loss in the winter 1999/2000. Geoscientific Model Development, 2010, 3, 585-601.	1.3	26
41	Multimodel assessment of the upper troposphere and lower stratosphere: Tropics and global trends. Journal of Geophysical Research, 2010, 115, .	3.3	171
42	The Lagrangian chemistry and transport model ATLAS: validation of advective transport and mixing. Geoscientific Model Development, 2009, 2, 153-173.	1.3	46
43	Understanding the relation between Arctic ozone loss and the volume of polar stratospheric clouds. International Journal of Remote Sensing, 2009, 30, 4065-4070.	1.3	5
44	Water vapour transport in the tropical tropopause region in coupled Chemistry-Climate Models and ERA-40 reanalysis data. Atmospheric Chemistry and Physics, 2009, 9, 2679-2694.	1.9	14
45	Sensitivity of polar stratospheric ozone loss to uncertainties in chemical reaction kinetics. Atmospheric Chemistry and Physics, 2009, 9, 8651-8660.	1.9	25
46	Polar stratospheric chlorine kinetics from a selfâ€match flight during SOLVEâ€II/EUPLEX. Geophysical Research Letters, 2008, 35, .	1.5	20
47	Variations of the residual circulation in the Northern Hemispheric winter. Journal of Geophysical Research, 2008, 113, .	3.3	18
48	Relative importance of dynamical and chemical contributions to Arctic wintertime ozone. Geophysical Research Letters, 2008, 35, .	1.5	54
49	Ozone trends at northern mid- and high latitudes â€“ a European perspective. Annales Geophysicae, 2008, 26, 1207-1220.	0.6	128
50	Improvement of vertical and residual velocities in pressure or hybrid sigma-pressure coordinates in analysis data in the stratosphere. Atmospheric Chemistry and Physics, 2008, 8, 265-272.	1.9	38
51	Correlation between equatorial Kelvin waves and the occurrence of extremely thin ice clouds at the tropical tropopause. Atmospheric Chemistry and Physics, 2008, 8, 4019-4026.	1.9	50
52	Ozonesonde observations in the Arctic during 1989â€“2003: Ozone variability and trends in the lower stratosphere and free troposphere. Journal of Geophysical Research, 2007, 112, .	3.3	45
53	A process-oriented regression model for column ozone. Journal of Geophysical Research, 2007, 112, .	3.3	59
54	Comparison of polar ozone loss rates simulated by one-dimensional and three-dimensional models with Match observations in recent Antarctic and Arctic winters. Journal of Geophysical Research, 2007, 112, .	3.3	20

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55	Toward a better quantitative understanding of polar stratospheric ozone loss. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	58
56	Arctic winter 2005: Implications for stratospheric ozone loss and climate change. Geophysical Research Letters, 2006, 33, .	1.5	151
57	Chemical ozone loss in the Arctic and Antarctic stratosphere between 1992 and 2005. Geophysical Research Letters, 2006, 33, .	1.5	70
58	On the possible causes of recent increases in northern hemispheric total ozone from a statistical analysis of satellite data from 1979 to 2003. Atmospheric Chemistry and Physics, 2006, 6, 1165-1180.	1.9	103
59	Large decadal scale changes of polar ozone suggest solar influence. Atmospheric Chemistry and Physics, 2006, 6, 1835-1841.	1.9	33
60	Chemical ozone loss in the Arctic winter 2002/2003 determined with Match. Atmospheric Chemistry and Physics, 2006, 6, 2783-2792.	1.9	28
61	Statistical analysis of the precision of the Match method. Atmospheric Chemistry and Physics, 2005, 5, 2713-2727.	1.9	13
62	A Strategy for Process-Oriented Validation of Coupled Chemistryâ€"Climate Models. Bulletin of the American Meteorological Society, 2005, 86, 1117-1134.	1.7	139
63	Influence of tropospheric SO2emissions on particle formation and the stratospheric humidity. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	38
64	Integrated equivalent latitude as a proxy for dynamical changes in ozone column. Geophysical Research Letters, 2005, 32, .	1.5	31
65	Arctic ozone loss and climate sensitivity: Updated three-dimensional model study. Geophysical Research Letters, 2005, 32, .	1.5	46
66	Arctic ozone loss and climate change. Geophysical Research Letters, 2004, 31, .	1.5	284
67	Extrapolating future Arctic ozone losses. Atmospheric Chemistry and Physics, 2004, 4, 1849-1856.	1.9	20
68	On the unexplained stratospheric ozone losses during cold Arctic Januaries. Geophysical Research Letters, 2003, 30, 8-1-8-4.	1.5	68
69	Enhanced Upper Tropical Tropospheric COS: Impact on the Stratospheric Aerosol Layer. Science, 2003, 300, 307-310.	6.0	98
70	POAM III observations of arctic ozone loss for the 1999/2000 winter. Journal of Geophysical Research, 2002, 107, SOL 5-1.	3.3	38
71	Comparison of empirically derived ozone losses in the Arctic vortex. Journal of Geophysical Research, 2002, 107, SOL 7-1.	3.3	56
72	Chemical depletion of Arctic ozone in winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 18-1.	3.3	95

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73	Chemical loss of ozone during the Arctic winter of 1999/2000: An analysis based on balloon-borne observations. Journal of Geophysical Research, 2002, 107, SOL 11-1.	3.3	39
74	Arctic ozone loss in threshold conditions: Match observations in 1997/1998 and 1998/1999. Journal of Geophysical Research, 2001, 106, 7495-7503.	3.3	66
75	Title is missing!. Journal of Atmospheric Chemistry, 2001, 39, 123-138.	1.4	15
76	Variations in the tropical uplift following the Pinatubo eruption studied by infrared solar absorption spectrometry. Geophysical Research Letters, 2000, 27, 2609-2612.	1.5	3
77	Arctic and Antarctic ozone layer observations: chemical and dynamical aspects of variability and long-term changes in the polar stratosphere. Polar Research, 2000, 19, 193-204.	1.6	14
78	Ozone loss rates in the Arctic stratosphere in the winter 1994/1995: Model simulations underestimate results of the Match analysis. Journal of Geophysical Research, 2000, 105, 15175-15184.	3.3	42
79	Match observations in the Arctic winter 1996/97: High stratospheric ozone loss rates correlate with low temperatures deep inside the polar vortex. Geophysical Research Letters, 2000, 27, 205-208.	1.5	62
80	Arctic and Antarctic ozone layer observations: chemical and dynamical aspects of variability and long-term changes in the polar stratosphere. Polar Research, 2000, 19, 193-204.	1.6	10
81	Chemical Ozone Loss in the Arctic Winter 1994/95 as Determined by the Match Technique. Journal of Atmospheric Chemistry, 1999, 32, 35-59.	1.4	90
82	Correction to â€œOzone loss rates in the Arctic stratosphere in the winter 1991/92: Model calculations compared with match resultsâ€. Geophysical Research Letters, 1999, 26, 327-327.	1.5	0
83	A test of our understanding of the ozone chemistry in the Arctic polar vortex based on in situ measurements of ClO, BrO, and O3in the 1994/1995 winter. Journal of Geophysical Research, 1999, 104, 18755-18768.	3.3	42
84	Subsidence, mixing, and denitrification of Arctic polar vortex air measured during POLARIS. Journal of Geophysical Research, 1999, 104, 26611-26623.	3.3	49
85	Ground-based observations of Arctic O3loss during spring and summer 1997. Journal of Geophysical Research, 1999, 104, 26497-26510.	3.3	41
86	Title is missing!. Journal of Atmospheric Chemistry, 1998, 30, 187-207.	1.4	64
87	Ozone loss rates in the Arctic stratosphere in the winter 1991/92: Model calculations compared with match results. Geophysical Research Letters, 1998, 25, 4325-4328.	1.5	68
88	In situ measurements of stratospheric ozone depletion rates in the Arctic winter 1991/1992: A Lagrangian approach. Journal of Geophysical Research, 1998, 103, 5843-5853.	3.3	102
89	Prolonged stratospheric ozone loss in the 1995â€"96 Arctic winter. Nature, 1997, 389, 835-838.	13.7	216
90	Observational evidence for chemical ozone depletion over the Arctic in winter 1991â€"92. Nature, 1995, 375, 131-134.	13.7	178

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91	Cloud Condensation Nuclei. , 0, , 285-297.		0