Alexei Korolev

List of Publications by Year
in descending order

47 papers	3,176 citations	172457 29 h-index	233421 45 g-index
72 all docs	72 docs citations	72 times ranked	2327 citing authors

#	Article	IF	Citations
1	Representation of microphysical processes in cloudâ€resolving models: Spectral (bin) microphysics versus bulk parameterization. Reviews of Geophysics, 2015, 53, 247-322.	23.0	266
2	Indirect and Semi-direct Aerosol Campaign. Bulletin of the American Meteorological Society, 2011, 92, 183-201.	3.3	228
3	Limitations of the Wegenerâ€"Bergeronâ€"Findeisen Mechanism in the Evolution of Mixed-Phase Clouds. Journals of the Atmospheric Sciences, 2007, 64, 3372-3375.	1.7	216
4	Mixed-Phase Clouds: Progress and Challenges. Meteorological Monographs, 2017, 58, 5.1-5.50.	5.0	165
5	Confronting the Challenge of Modeling Cloud and Precipitation Microphysics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001689.	3.8	154
6	Shattering during Sampling by OAPs and HVPS. Part I: Snow Particles. Journal of Atmospheric and Oceanic Technology, 2005, 22, 528-542.	1.3	128
7	Chapter 7. Secondary Ice Production - current state of the science and recommendations for the future. Meteorological Monographs, 0, , .	5.0	116
8	Airspeed Corrections for Optical Array Probe Sample Volumes. Journal of Atmospheric and Oceanic Technology, 1997, 14, 1224-1229.	1.3	113
9	Phase transformation of mixed-phase clouds. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 19-38.	2.7	113
10	Reconstruction of the Sizes of Spherical Particles from Their Shadow Images. Part I: Theoretical Considerations. Journal of Atmospheric and Oceanic Technology, 2007, 24, 376-389.	1.3	113
11	Cloud Ice Properties: In Situ Measurement Challenges. Meteorological Monographs, 2017, 58, 9.1-9.23.	5.0	102
12	The Effect of Dynamics on Mixed-Phase Clouds: Theoretical Considerations. Journals of the Atmospheric Sciences, 2008, 65, 66-86.	1.7	98
13	Relative Humidity in Liquid, Mixed-Phase, and Ice Clouds. Journals of the Atmospheric Sciences, 2006, 63, 2865-2880.	1.7	94
14	Effects of 20â€"100â€¯nm particles on liquid clouds in the clean summertime Arctic. Atmospheric Chemistry and Physics, 2016, 16, 11107-11124.	4.9	94
15	Review of experimental studies of secondary ice production. Atmospheric Chemistry and Physics, 2020, 20, 11767-11797.	4.9	92
16	Modification and Tests of Particle Probe Tips to Mitigate Effects of Ice Shattering. Journal of Atmospheric and Oceanic Technology, 2013, 30, 690-708.	1.3	83
17	Supersaturation and Diffusional Droplet Growth in Liquid Clouds. Journals of the Atmospheric Sciences, 2013, 70, 2778-2793.	1.7	76
18	A new look at the environmental conditions favorable to secondary ice production. Atmospheric Chemistry and Physics, 2020, 20, 1391-1429.	4.9	69

#	Article	IF	Citations
19	Assessment of the performance of the inter-arrival time algorithm to identify ice shattering artifacts in cloud particle probe measurements. Atmospheric Measurement Techniques, 2015, 8, 761-777.	3.1	63
20	An Assessment of the Impact of Antishattering Tips and Artifact Removal Techniques on Cloud Ice Size Distributions Measured by the 2D Cloud Probe. Journal of Atmospheric and Oceanic Technology, 2014, 31, 2567-2590.	1.3	57
21	Processing of Ice Cloud In Situ Data Collected by Bulk Water, Scattering, and Imaging Probes: Fundamentals, Uncertainties, and Efforts toward Consistency. Meteorological Monographs, 2017, 58, 11.1-11.33.	5.0	56
22	Observations of cloud microphysics and ice formation during COPE. Atmospheric Chemistry and Physics, 2016, 16, 799-826.	4.9	55
23	A Review of Ice Particle Shapes in Cirrus formed In Situ and in Anvils. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10049-10090.	3.3	54
24	Ice Crystal Sizes in High Ice Water Content Clouds. Part II: Statistics of Mass Diameter Percentiles in Tropical Convection Observed during the HAIC/HIWC Project. Journal of Atmospheric and Oceanic Technology, 2017, 34, 117-136.	1.3	52
25	On the role of iceâ€nucleating aerosol in the formation of ice particles in tropical mesoscale convective systems. Geophysical Research Letters, 2017, 44, 1574-1582.	4.0	45
26	The Convective Precipitation Experiment (COPE): Investigating the Origins of Heavy Precipitation in the Southwestern United Kingdom. Bulletin of the American Meteorological Society, 2016, 97, 1003-1020.	3.3	40
27	In Situ, Airborne Instrumentation: Addressing and Solving Measurement Problems in Ice Clouds. Bulletin of the American Meteorological Society, 2012, 93, ES29-ES34.	3.3	38
28	Theoretical analysis of mixing in liquid clouds â€" Part 3: Inhomogeneous mixing. Atmospheric Chemistry and Physics, 2016, 16, 9273-9297.	4.9	37
29	Theoretical investigation of mixing in warm clouds â€" Part 2: Homogeneous mixing. Atmospheric Chemistry and Physics, 2016, 16, 9255-9272.	4.9	36
30	Theoretical study of mixing in liquid clouds â€" Part 1: Classical concepts. Atmospheric Chemistry and Physics, 2016, 16, 9235-9254.	4.9	35
31	High ice water content at low radar reflectivity near deep convection â€" Part 2: Evaluation of microphysical pathways in updraft parcel simulations. Atmospheric Chemistry and Physics, 2015, 15, 11729-11751.	4.9	32
32	Mixedâ€phase clouds in a turbulent environment. Part 1: Largeâ€eddy simulation experiments. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 855-869.	2.7	31
33	A New Mechanism of Droplet Size Distribution Broadening during Diffusional Growth. Journals of the Atmospheric Sciences, 2013, 70, 2051-2071.	1.7	28
34	High ice water content at low radar reflectivity near deep convection â€" Part 1: Consistency of in situ and remote-sensing observations with stratiform rain column simulations. Atmospheric Chemistry and Physics, 2015, 15, 11713-11728.	4.9	25
35	Supersaturation and diffusional droplet growth in liquid clouds: Polydisperse spectra. Journal of Geophysical Research D: Atmospheres, 2014, 119, 12,872.	3.3	22
36	Determination of ice water content (IWC) in tropical convective clouds from X-band dual-polarization airborne radar. Atmospheric Measurement Techniques, 2019, 12, 5897-5911.	3.1	20

#	Article	IF	Citations
37	Cloudâ€“Aerosolâ€“Turbulence Interactions: Science Priorities and Concepts for a Large-Scale Laboratory Facility. Bulletin of the American Meteorological Society, 2020, 101, E1026-E1035.	3.3	16
38	The Effects of Precipitation on Cloud Droplet Measurement Devices. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1404-1409.	1.3	15
39	Calibrations and Performance of the Airborne Cloud Extinction Probe. Journal of Atmospheric and Oceanic Technology, 2014, 31, 326-345.	1.3	14
40	Microphysical processes producing high ice water contents (HIWCs) in tropical convective clouds during the HAIC-HIWC field campaign: evaluation of simulations using bulk microphysical schemes. Atmospheric Chemistry and Physics, 2021, 21, 6919-6944.	4.9	13
41	Theoretical Analysis of Liquidâ€“Ice Interaction in the Unsaturated Environment with Application to the Problem of Homogeneous Mixing. Journals of the Atmospheric Sciences, 2018, 75, 1045-1062.	1.7	12
42	Characterization of the Pilot X-band radar responses to the HIWC environment during the Cayenne HAIC-HIWC 2015 Campaign. , 2016, , .		8
43	Supercooled liquid water and secondary ice production in Kelvinâ€“Helmholtz instability as revealed by radar Doppler spectra observations. Atmospheric Chemistry and Physics, 2021, 21, 13593-13608.	4.9	8
44	Observations of the microphysical evolution of convective clouds in the southwest of the United Kingdom. Atmospheric Chemistry and Physics, 2018, 18, 15329-15344.	4.9	7
45	Dependence of Ice Microphysical Properties On Environmental Parameters: Results from HAIC-HIWC Cayenne Field Campaign. Journals of the Atmospheric Sciences, 2021, , .	1.7	6
46	Combined Effect of the Wegenerâ€“Bergeronâ€“Findeisen Mechanism and Large Eddies on Microphysics of Mixed-Phase Stratiform Clouds. Journals of the Atmospheric Sciences, 2022, 79, 383-407.	1.7	4
47	High Ice Water Content Conditions Associated with Wintertime Elevated Convection in the Midwest. Journal of Applied Meteorology and Climatology, 2022, , .	1.5	2