

# Mikhail Ovchinnikov

## List of Publications by Citations

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46  
papers

2,017  
citations

23  
h-index

44  
g-index

50  
ext. papers

2,257  
ext. citations

5.1  
avg, IF

4.29  
L-index

#	Paper	IF	Citations
46	Notes on the state-of-the-art numerical modeling of cloud microphysics. <i>Atmospheric Research</i> , <b>2000</b> , 55, 159-224	5.4	274
45	Dominant role by vertical wind shear in regulating aerosol effects on deep convective clouds. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114,		216
44	Indirect and Semi-direct Aerosol Campaign. <i>Bulletin of the American Meteorological Society</i> , <b>2011</b> , 92, 183-201	6.1	202
43	Aerosol indirect effects in a multi-scale aerosol-climate model PNNL-MMF. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 5431-5455	6.8	123
42	Constraining cloud lifetime effects of aerosols using A-Train satellite observations. <i>Geophysical Research Letters</i> , <b>2012</b> , 39,	4.9	106
41	Droplet nucleation: Physically-based parameterizations and comparative evaluation. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2011</b> , 3,	7.1	90
40	Intercomparison of large-eddy simulations of Arctic mixed-phase clouds: Importance of ice size distribution assumptions. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2014</b> , 6, 223-248	7.1	88
39	Intercomparison of cloud model simulations of Arctic mixed-phase boundary layer clouds observed during SHEBA/FIRE-ACE. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2011</b> , 3, n/a-n/a	7.1	79
38	PDF Parameterization of Boundary Layer Clouds in Models with Horizontal Grid Spacings from 2 to 16 km. <i>Monthly Weather Review</i> , <b>2012</b> , 140, 285-306	2.4	66
37	Aerosol indirect effect from turbulence-induced broadening of cloud-droplet size distributions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 14243-14248	11.5	64
36	Aerosol optical depth increase in partly cloudy conditions. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		56
35	In situ characterization of cloud condensation nuclei, interstitial, and background particles using the single particle mass spectrometer, SPLAT II. <i>Analytical Chemistry</i> , <b>2010</b> , 82, 7943-51	7.8	55
34	Representation of Arctic mixed-phase clouds and the Wegener-Bergeron-Findeisen process in climate models: Perspectives from a cloud-resolving study. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		53
33	The mechanism of first raindrops formation in deep convective clouds. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2013</b> , 118, 9123-9140	4.4	50
32	The cloud condensation nuclei and ice nuclei effects on tropical anvil characteristics and water vapor of the tropical tropopause layer. <i>Environmental Research Letters</i> , <b>2010</b> , 5, 044005	6.2	46
31	Laboratory measurements and model sensitivity studies of dust deposition ice nucleation. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 7295-7308	6.8	45
30	A sensitivity analysis of cloud properties to CLUBB parameters in the single-column Community Atmosphere Model (SCAM5). <i>Journal of Advances in Modeling Earth Systems</i> , <b>2014</b> , 6, 829-858	7.1	37

29	Effects of ice number concentration on dynamics of a shallow mixed-phase stratiform cloud. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		36
28	A multiscale modeling framework model (superparameterized CAM5) with a higher-order turbulence closure: Model description and low-cloud simulations. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2015</b> , 7, 484-509	7.1	31
27	Tropical anvil characteristics and water vapor of the tropical tropopause layer: Impact of heterogeneous and homogeneous freezing parameterizations. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		27
26	Characterization of cumulus cloud fields using trajectories in the center of gravity versus water mass phase space: 2. Aerosol effects on warm convective clouds. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2016</b> , 121, 6356-6373	4.4	25
25	Nonlinear Advection Algorithms Applied to Interrelated Tracers: Errors and Implications for Modeling Aerosol-Cloud Interactions. <i>Monthly Weather Review</i> , <b>2009</b> , 137, 632-644	2.4	25
24	Parametric behaviors of CLUBB in simulations of low clouds in the Community Atmosphere Model (CAM). <i>Journal of Advances in Modeling Earth Systems</i> , <b>2015</b> , 7, 1005-1025	7.1	24
23	Minimalist model of ice microphysics in mixed-phase stratiform clouds. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 3756-3760	4.9	23
22	Characterization of cumulus cloud fields using trajectories in the center of gravity versus water mass phase space: 1. Cloud tracking and phase space description. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2016</b> , 121, 6336-6355	4.4	20
21	Retrieval of aerosol optical depth in vicinity of broken clouds from reflectance ratios: Sensitivity study. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2009</b> , 110, 1677-1689	2.1	18
20	Reexamination of the State of the Art of Cloud Modeling Shows Real Improvements. <i>Bulletin of the American Meteorological Society</i> , <b>2013</b> , 94, ES45-ES48	6.1	15
19	Airborne Aerosol in Situ Measurements during TCAP: A Closure Study of Total Scattering. <i>Atmosphere</i> , <b>2015</b> , 6, 1069-1101	2.7	14
18	Untangling dynamical and microphysical controls for the structure of stratocumulus. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 4432-4436	4.9	13
17	Modeling aerosol growth by aqueous chemistry in a nonprecipitating stratiform cloud. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		12
16	Scaling of an Atmospheric Model to Simulate Turbulence and Cloud Microphysics in the Pi Chamber. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2019</b> , 11, 1981-1994	7.1	10
15	Long-lifetime ice particles in mixed-phase stratiform clouds: Quasi-steady and recycled growth. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2015</b> , 120, 11,617-11,635	4.4	10
14	Retrieval of aerosol optical depth in vicinity of broken clouds from reflectance ratios: case study. <i>Atmospheric Measurement Techniques</i> , <b>2010</b> , 3, 1333-1349	4	10
13	Low-Cloud Feedback in CAM5-CLUBB: Physical Mechanisms and Parameter Sensitivity Analysis. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2018</b> , 10, 2844-2864	7.1	10
12	Parameterizing correlations between hydrometeor species in mixed-phase Arctic clouds. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		8

11	Stochastic radiative transfer in multilayer broken clouds. Part II: validation tests. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2003</b> , 77, 395-416	2.1	8
10	Microphysical consequences of the spatial distribution of ice nucleation in mixed-phase stratiform clouds. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 5280-5287	4.9	7
9	Dependence of Vertical Alignment of Cloud and Precipitation Properties on Their Effective Fall Speeds. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2019</b> , 124, 2079-2093	4.4	4
8	Evaluation of Subgrid-Scale Hydrometeor Transport Schemes Using a High-Resolution Cloud-Resolving Model. <i>Journals of the Atmospheric Sciences</i> , <b>2015</b> , 72, 3715-3731	2.1	4
7	Formulation of Autoconversion and Drop Spectra Shape in Shallow Cumulus Clouds. <i>Journals of the Atmospheric Sciences</i> , <b>2020</b> , 77, 711-722	2.1	3
6	Vertical overlap of probability density functions of cloud and precipitation hydrometeors. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2016</b> , 121, 12,966-12,984	4.4	3
5	A PDF-Based Parameterization of Subgrid-Scale Hydrometeor Transport in Deep Convection. <i>Journals of the Atmospheric Sciences</i> , <b>2017</b> , 74, 1293-1309	2.1	2
4	Aerosol retrievals under partly cloudy conditions: challenges and perspectives. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , <b>2011</b> , 205-232	0.3	2
3	Development and Evaluation of an Explicit Treatment of Aerosol Processes at Cloud Scale Within a Multi-Scale Modeling Framework (MMF). <i>Journal of Advances in Modeling Earth Systems</i> , <b>2018</b> , 10, 1663-1679	7.1	1
2	Mesoscale Convective Systems in a Superparameterized E3SM Simulation at High Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , <b>2022</b> , 14,	7.1	1
1	Markovian approach and its applications in a cloudy atmosphere <b>2013</b> , 69-107		