

Dmitry S Efremenko

List of Publications by Year in Descending Order

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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.

70
papers

507
citations

12
h-index

19
g-index

83
ext. papers

606
ext. citations

2.5
avg, IF

4.24
L-index

#	Paper	IF	Citations
70	Evaluating the assimilation of S5P/TROPOMI near real-time SO ₂ columns and layer height data into the CAMS integrated forecasting system (CY47R1), based on a case study of the 2019 Raikoke eruption. <i>Geoscientific Model Development</i> , 2022 , 15, 971-994	6.3	2
69	Cloud tomographic retrieval algorithms. II: Adjoint method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2022 , 285, 108177	2.1	0
68	Volcanic SO ₂ layer height by TROPOMI/S5P: evaluation against IASI/MetOp and CALIOP/CALIPSO observations. <i>Atmospheric Chemistry and Physics</i> , 2022 , 22, 5665-5683	6.8	1
67	An Overview of Neural Network Methods for Predicting Uncertainty in Atmospheric Remote Sensing. <i>Remote Sensing</i> , 2021 , 13, 5061	5	1
66	Accuracy Enhancement of the Two-Stream Radiative Transfer Model for Computing Absorption Bands at the Presence of Aerosols 2021 , 79-86		
65	Optimization of Aerosol Model Selection for TROPOMI/S5P. <i>Remote Sensing</i> , 2021 , 13, 2489	5	1
64	Spectral spherical harmonics discrete ordinate method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021 , 258, 107386	2.1	2
63	A Proof-of-Concept Algorithm for the Retrieval of Total Column Amount of Trace Gases in a Multi-Dimensional Atmosphere. <i>Remote Sensing</i> , 2021 , 13, 270	5	
62	Inverse Problems 2021 , 233-292		
61	Introduction to Remote Sensing 2021 , 1-35		
60	Fast Hyper-Spectral Radiative Transfer Model Based on the Double Cluster Low-Streams Regression Method. <i>Remote Sensing</i> , 2021 , 13, 434	5	1
59	Light Scattering, Absorption, Extinction, and Propagation in the Terrestrial Atmosphere 2021 , 77-147		
58	DecSolNet: A noise resistant missing information recovery framework for daily satellite NO ₂ columns. <i>Atmospheric Environment</i> , 2021 , 246, 118143	5.3	1
57	Discrete Ordinate Radiative Transfer Model With the Neural Network Based Eigenvalue Solver: proof Of Concept 2021 , 56-62		2
56	Cloud tomographic retrieval algorithms. I: Surrogate minimization method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021 , 107954	2.1	1
55	Radiative Transfer Models 2021 , 149-232		
54	Physical Properties of the Terrestrial Atmosphere 2021 , 37-75		

53	Insight into Construction of Tikhonov-Type Regularization for Atmospheric Retrievals. <i>Atmosphere</i> , 2020 , 11, 1052	2.7	3
52	Cluster Low-Streams Regression Method for Hyperspectral Radiative Transfer Computations: Cases of O2 A- and CO2 Bands. <i>Remote Sensing</i> , 2020 , 12, 1250	5	4
51	Analysis of the Discrete Theory of Radiative Transfer in the Coupled Ocean-Atmosphere System: Current Status, Problems and Development Prospects. <i>Journal of Marine Science and Engineering</i> , 2020 , 8, 202	2.4	9
50	Fraunhofer Diffraction Description In The Approximation Of The Light Field Theory 2020 , 25-30		1
49	Developing Scattering Morphology Resolved Total Internal Reflection Microscopy (SMR-TIRM) for Orientation Detection of Colloidal Ellipsoids. <i>Langmuir</i> , 2020 , 36, 13041-13050	4	2
48	Model Selection in Atmospheric Remote Sensing with Application to Aerosol Retrieval from DSCOVR/EPIC. Part 2: Numerical Analysis. <i>Remote Sensing</i> , 2020 , 12, 3656	5	4
47	Model Selection in Atmospheric Remote Sensing with an Application to Aerosol Retrieval from DSCOVR/EPIC, Part 1: Theory. <i>Remote Sensing</i> , 2020 , 12, 3724	5	4
46	A Spectral Acceleration Approach for the Spherical Harmonics Discrete Ordinate Method. <i>Remote Sensing</i> , 2020 , 12, 3703	5	3
45	Linearizations of the Spherical Harmonic Discrete Ordinate Method (SHDOM). <i>Atmosphere</i> , 2019 , 10, 292	2.7	7
44	Analysis of Two Dimensionality Reduction Techniques for Fast Simulation of the Spectral Radiances in the Hartley-Huggins Band. <i>Atmosphere</i> , 2019 , 10, 142	2.7	14
43	A light scattering model for total internal reflection microscopy of geometrically anisotropic particles. <i>Journal of Modern Optics</i> , 2019 , 66, 1139-1151	1.1	6
42	Improvement of EPIC/DSCOVR Image Registration by Means of Automatic Coastline Detection. <i>Remote Sensing</i> , 2019 , 11, 1747	5	1
41	Application of the Photometric Theory of the Radiance Field in the Problems of Electron Scattering 2019 , 88-96		3
40	A Review of Dimensionality Reduction Techniques for Processing Hyper-Spectral Optical Signal 2019 , 85-98		12
39	Sulfur dioxide layer height retrieval from Sentinel-5 Precursor/TROPOMI using FP_ILM. <i>Atmospheric Measurement Techniques</i> , 2019 , 12, 5503-5517	4	32
38	Fast Stochastic Radiative Transfer Models for Trace Gas and Cloud Property Retrievals Under Cloudy Conditions. <i>Springer Series in Light Scattering</i> , 2018 , 231-277	1.3	7
37	Methods for Electromagnetic Scattering by Large Axisymmetric Particles with Extreme Geometries. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2018 , 49-69	0.4	1
36	Linearized radiative transfer models for retrieval of cloud parameters from EPIC/DSCOVR measurements. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 213, 241-251	2.1	7

35	Radiative transfer models for retrieval of cloud parameters from EPIC/DSCOVR measurements. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 213, 228-240	2.1	14
34	Determination of the Thickness of Nanofilms Using X-Ray Photoelectron Spectroscopy. <i>Journal of Surface Investigation</i> , 2018 , 12, 1182-1189	0.5	0
33	A review of the matrix-exponential formalism in radiative transfer. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017 , 196, 17-45	2.1	21
32	Volcanic SO ₂ plume height retrieval from UV sensors using a full-physics inverse learning machine algorithm. <i>International Journal of Remote Sensing</i> , 2017 , 38, 1-27	3.1	59
31	Differential inverse inelastic mean free path and differential surface excitation probability retrieval from electron energy loss spectra. <i>Vacuum</i> , 2017 , 136, 146-155	3.7	11
30	Extracting the differential inverse inelastic mean free path and differential surface excitation probability of Tungsten from X-ray photoelectron spectra and electron energy loss spectra. <i>Journal of Physics: Conference Series</i> , 2017 , 941, 012019	0.3	1
29	Determination of atomic hydrogen in hydrocarbons by means of the reflected electron energy loss spectroscopy and the X-ray photoelectron spectroscopy. <i>Journal of Physics: Conference Series</i> , 2016 , 748, 012005	0.3	2
28	Differential inverse inelastic mean free path determination on the base of X-ray photoelectron emission spectra. <i>Journal of Surface Investigation</i> , 2016 , 10, 906-911	0.5	2
27	Analytical and numerical methods for computing electron partial intensities in the case of multilayer systems. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2016 , 210, 16-29	1.7	13
26	A stochastic cloud model for cloud and ozone retrievals from UV measurements. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016 , 184, 167-179	2.1	11
25	Methods with discrete sources for electromagnetic scattering by large axisymmetric particles with extreme geometries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015 , 164, 137-146	2.1	2
24	Photoelectron spectra of finite-thickness layers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015 , 33, 03D101	1.3	11
23	Influence of the processes of multiple elastic scattering on the angular distributions of X-ray photoelectrons. <i>Journal of Surface Investigation</i> , 2014 , 8, 71-75	0.5	4
22	Acceleration of radiative transfer model calculations for the retrieval of trace gases under cloudy conditions. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014 , 135, 58-65	2.1	7
21	Optical property dimensionality reduction techniques for accelerated radiative transfer performance: Application to remote sensing total ozone retrievals. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014 , 133, 128-135	2.1	25
20	Multi-core-CPU and GPU-accelerated radiative transfer models based on the discrete ordinate method. <i>Computer Physics Communications</i> , 2014 , 185, 3079-3089	4.2	42
19	Approximate models for broken clouds in stochastic radiative transfer theory. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014 , 145, 74-87	2.1	10
18	Discrete ordinate method with matrix exponential for stochastic radiative transfer in broken clouds. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014 , 138, 1-16	2.1	10

17	Experimental verification of the technique for calculating light scattering in turbid media and determination of the single-scattering albedo based on the spectroscopy of elastically reflected electrons. <i>Journal of Surface Investigation</i> , 2013 , 7, 285-289	0.5	2
16	Photoelectron emission for layers of finite thickness. <i>Journal of Surface Investigation</i> , 2013 , 7, 382-387	0.5	13
15	On the application of the invariant embedding method and the radiative transfer equation codes for surface state analysis 2013 , 363-423		8
14	Small-angle modification of the radiative transfer equation for a pseudo-spherical atmosphere. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 114, 82-90	2.1	7
13	Acceleration techniques for the discrete ordinate method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 114, 73-81	2.1	24
12	A multi-dimensional vector spherical harmonics discrete ordinate method for atmospheric radiative transfer. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 118, 121-131	2.1	16
11	An analysis of the short-characteristic method for the spherical harmonic discrete ordinate method (SHDOM). <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 119, 114-127	2.1	6
10	Determining the applicability boundaries of small-angle approximation solutions to the radiative transfer equation for elastic peak electron spectroscopy. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2012 , 76, 565-569	0.4	2
9	Efficiency of algorithm for solution of vector radiative transfer equation in turbid medium slab. <i>Journal of Physics: Conference Series</i> , 2012 , 369, 012021	0.3	7
8	Direct numerical reconstruction of inelastic cross sections from REELS and ISS spectra. <i>Journal of Surface Investigation</i> , 2011 , 5, 375-382	0.5	12
7	Angular distributions of electrons and light ions elastically reflected from a solid surface. <i>Journal of Surface Investigation</i> , 2010 , 4, 488-493	0.5	3
6	Extraction of cross-sections of inelastic scattering from energy spectra of reflected atomic particles. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2010 , 74, 170-174	0.4	14
5	Influence of multiple elastic scattering on the shape of the elastically scattered electron peak. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2010 , 177, 35-41	1.7	8
4	Spectroscopy of charged particles elastically scattered by plane-parallel solid layers. <i>Journal of Surface Investigation</i> , 2008 , 2, 371-375	0.5	2
3	Two Machine Learning Based Schemes for Solving Direct and Inverse Problems of Radiative Transfer Theory paper45-1-paper45-12		
2	Methods Calculating the Slab Radiance Factor paper16-1-paper16-13		
1	The Cluster Low-Streams Regression Method for Fast Computations of Top-of-the-Atmosphere Radiances in Absorption Bands short25-1-short25-9		