

Michael Kahnert

List of Publications by Citations

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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.

66

papers

1,611

citations

25

h-index

38

g-index

89

ext. papers

1,786

ext. citations

3

avg, IF

5.45

L-index

#	Paper	IF	Citations
66	Observations of the spectral dependence of linear particle depolarization ratio of aerosols using NASA Langley airborne High Spectral Resolution Lidar. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 13453-13473	6.8	115
65	Light scattering modeling of small feldspar aerosol particles using polyhedral prisms and spheroids. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2006 , 101, 471-487	2.1	78
64	Optical properties of light absorbing carbon aggregates mixed with sulfate: assessment of different model geometries for climate forcing calculations. <i>Optics Express</i> , 2012 , 20, 10042-58	3.3	77
63	Black carbon fractal morphology and short-wave radiative impact: a modelling study. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 11745-11759	6.8	62
62	Spherical and spheroidal model particles as an error source in aerosol climate forcing and radiance computations: A case study for feldspar aerosols. <i>Journal of Geophysical Research</i> , 2005 , 110,		62
61	Modelling light scattering by mineral dust using spheroids: assessment of applicability. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 5347-5363	6.8	61
60	Can particle shape information be retrieved from light-scattering observations using spheroidal model particles?. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011 , 112, 2213-2225	2.1	60
59	Mie simulations as an error source in mineral aerosol radiative forcing calculations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007 , 133, 299-307	6.4	59
58	On the Discrepancy between Modeled and Measured Mass Absorption Cross Sections of Light Absorbing Carbon Aerosols. <i>Aerosol Science and Technology</i> , 2010 , 44, 453-460	3.4	57
57	Review: Model particles in atmospheric optics. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014 , 146, 41-58	2.1	54
56	Models for integrated and differential scattering optical properties of encapsulated light absorbing carbon aggregates. <i>Optics Express</i> , 2013 , 21, 7974-93	3.3	53
55	Variational data analysis of aerosol species in a regional CTM: background error covariance constraint and aerosol optical observation operators. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2008 , 60, 753-770	3.3	51
54	The European aerosol budget in 2006. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 1117-1139	6.8	50
53	Reproducing the optical properties of fine desert dust aerosols using ensembles of simple model particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2004 , 85, 231-249	2.1	46
52	Numerical solutions of the macroscopic Maxwell equations for scattering by non-spherical particles: A tutorial review. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016 , 178, 22-37	2.1	42
51	Irreducible representations of finite groups in the T-matrix formulation of the electromagnetic scattering problem. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005 , 22, 1187-99	1.8	41
50	Comparison of scattering by different nonspherical, wavelength-scale particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012 , 113, 2391-2405	2.1	40

49	Volcanic ash infrared signature: porous non-spherical ash particle shapes compared to homogeneous spherical ash particles. <i>Atmospheric Measurement Techniques</i> , 2014 , 7, 919-929	4	38
48	Light scattering by particles with small-scale surface roughness: Comparison of four classes of model geometries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012 , 113, 2356-2367	2.1	38
47	Light scattering by a cube: Accuracy limits of the discrete dipole approximation and the T-matrix method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 123, 176-183	2.1	34
46	Optical properties of black carbon aerosols encapsulated in a shell of sulfate: comparison of the closed cell model with a coated aggregate model. <i>Optics Express</i> , 2017 , 25, 24579-24593	3.3	34
45	Modeling optical properties of particles with small-scale surface roughness: combination of group theory with a perturbation approach. <i>Optics Express</i> , 2011 , 19, 11138-51	3.3	30
44	Uncertainties in measured and modelled asymmetry parameters of mineral dust aerosols. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2006 , 100, 173-178	2.1	30
43	On the impact of non-sphericity and small-scale surface roughness on the optical properties of hematite aerosols. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011 , 112, 1815-1824	2.1	27
42	Modelling radiometric properties of inhomogeneous mineral dust particles: Applicability and limitations of effective medium theories. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015 , 152, 16-27	2.1	26
41	Radiance and flux simulations for mineral dust aerosols: Assessing the error due to using spherical or spheroidal model particles. <i>Journal of Geophysical Research</i> , 2004 , 109,		23
40	Modelling optical properties of atmospheric black carbon aerosols. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020 , 244, 106849	2.1	22
39	The T-matrix code Tsym for homogeneous dielectric particles with finite symmetries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 123, 62-78	2.1	20
38	Impact of dust particle non-sphericity on climate simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013 , 139, 2222-2232	6.4	17
37	Sensitivity of the shortwave radiative effect of dust on particle shape: Comparison of spheres and spheroids. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		16
36	A case study on the reciprocity in light scattering computations. <i>Optics Express</i> , 2012 , 20, 23253-74	3.3	16
35	On the observability of chemical and physical aerosol properties by optical observations: Inverse modelling with variational data assimilation. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2009 , 61, 747-755	3.3	16
34	Impact of ice particle shape on short-wave radiative forcing: A case study for an arctic ice cloud. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008 , 109, 1196-1218	2.1	15
33	Light scattering by the Martian dust analog, palagonite, modeled with ellipsoids. <i>Optics Express</i> , 2013 , 21, 17972-85	3.3	14
32	Electromagnetic scattering by nonspherical particles: Recent advances. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2010 , 111, 1788-1790	2.1	14

31	Calculation of optical properties of light-absorbing carbon with weakly absorbing coating: A model with tunable transition from film-coating to spherical-shell coating. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 216, 17-36	2.1	14
30	Coupling aerosol optics to the MATCH (v5.5.0) chemical transport model and the SALSA (v1) aerosol microphysics module. <i>Geoscientific Model Development</i> , 2016 , 9, 1803-1826	6.3	13
29	Variational data-analysis method for combining laboratory-measured light-scattering phase functions and forward-scattering computations. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007 , 103, 27-42	2.1	12
28	Electromagnetic Wave Scattering on Nonspherical Particles. <i>Springer Series in Optical Sciences</i> , 2014	0.5	11
27	How much information do extinction and backscattering measurements contain about the chemical composition of atmospheric aerosol?. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 3423-3444	6.8	11
26	Requirements for developing a regional monitoring capacity for aerosols in Europe within EMEP. <i>Journal of Environmental Monitoring</i> , 2004 , 6, 646-55		11
25	Methodology for evaluating lateral boundary conditions in the regional chemical transport model MATCH (v5.5.0) using combined satellite and ground-based observations. <i>Geoscientific Model Development</i> , 2015 , 8, 3747-3763	6.3	10
24	The influence of observed cirrus microphysical properties on shortwave radiation: A case study over Oklahoma. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		10
23	Aerosol-optics model for the backscatter depolarisation ratio of mineral dust particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020 , 254, 107177	2.1	8
22	Disk and circumsolar radiances in the presence of ice clouds. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 6865-6882	6.8	8
21	Boundary symmetries in linear differential and integral equation problems applied to the self-consistent Green's function formalism of acoustic and electromagnetic scattering. <i>Optics Communications</i> , 2006 , 265, 383-393	2	8
20	T-matrix computations for particles with high-order finite symmetries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013 , 123, 79-91	2.1	7
19	Coating material-dependent differences in modelled lidar-measurable quantities for heavily coated soot particles. <i>Optics Express</i> , 2019 , 27, 36368-36387	3.3	7
18	Integration of prognostic aerosol-cloud interactions in a chemistry transport model coupled offline to a regional climate model. <i>Geoscientific Model Development</i> , 2015 , 8, 1885-1898	6.3	6
17	Microwave single-scattering properties of non-spheroidal raindrops. <i>Atmospheric Measurement Techniques</i> , 2020 , 13, 6933-6944	4	5
16	Modeling Optical Properties of Non-Cubical Sea-Salt Particles. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033674	4.4	5
15	Multi-species chemical data assimilation with the Danish Eulerian hemispheric model: system description and verification. <i>Journal of Atmospheric Chemistry</i> , 2016 , 73, 261-302	3.2	4
14	Aerosol optics model for black carbon applicable to remote sensing, chemical data assimilation, and climate modelling. <i>Optics Express</i> , 2021 , 29, 10639-10658	3.3	4

13	Exploiting the favourable alignment of CALIPSO's descending orbital tracks over Sweden to study aerosol characteristics. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2013 , 65, 21155	3.3	2
12	Multiple scattering by aerosols as seen from CALIPSO - a Monte-Carlo modelling study. <i>Optics Express</i> , 2019 , 27, 33683-33699	3.3	2
11	Marine aerosol properties over the Southern Ocean in relation to the wintertime meteorological conditions. <i>Atmospheric Chemistry and Physics</i> , 2022 , 22, 119-137	6.8	2
10	Optical properties of water-coated sea salt model particles. <i>Optics Express</i> , 2021 , 29, 34926-34950	3.3	2
9	Light scattering by particles with boundary symmetries 2008 , 69-107		2
8	Invariant-embedding T-matrix method 2020 , 145-188		2
7	Morphological Models for Inhomogeneous Particles: Light Scattering by Aerosols, Cometary Dust, and Living Cells 2016 , 299-337		2
6	Poster 17 2D variational data assimilation of near-surface chemical species. <i>Developments in Environmental Science</i> , 2007 , 6, 787-789		1
5	Convergence of the iterative T-matrix method. <i>Optics Express</i> , 2020 , 28, 28269-28282	3.3	1
4	Ensemble Perturbations for Chemical Data Assimilation. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2014 , 221-225	0.3	1
3	Information constraints in variational data assimilation. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2018 , 144, 2230-2244	6.4	1
2	Evaluation of a Chemical Data Assimilation System. <i>Springer Proceedings in Complexity</i> , 2014 , 439-444	0.3	
1	T-matrix concept 2020 , 57-144		