

# Michael Kahnert

## 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.

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	Marine aerosol properties over the Southern Ocean in relation to the wintertime meteorological conditions. <i>Atmospheric Chemistry and Physics</i> , <b>2022</b> , 22, 119-137	6.8	2
65	Optical properties of water-coated sea salt model particles. <i>Optics Express</i> , <b>2021</b> , 29, 34926-34950	3.3	2
64	Aerosol optics model for black carbon applicable to remote sensing, chemical data assimilation, and climate modelling. <i>Optics Express</i> , <b>2021</b> , 29, 10639-10658	3.3	4
63	Modeling Optical Properties of Non-Cubical Sea-Salt Particles. <i>Journal of Geophysical Research D: Atmospheres</i> , <b>2021</b> , 126, e2020JD033674	4.4	5
62	Aerosol-optics model for the backscatter depolarisation ratio of mineral dust particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2020</b> , 254, 107177	2.1	8
61	Modelling optical properties of atmospheric black carbon aerosols. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2020</b> , 244, 106849	2.1	22
60	Convergence of the iterative T-matrix method. <i>Optics Express</i> , <b>2020</b> , 28, 28269-28282	3.3	1
59	Microwave single-scattering properties of non-spheroidal raindrops. <i>Atmospheric Measurement Techniques</i> , <b>2020</b> , 13, 6933-6944	4	5
58	T-matrix concept <b>2020</b> , 57-144		
57	Invariant-imbedding T-matrix method <b>2020</b> , 145-188		2
56	Multiple scattering by aerosols as seen from CALIPSO - a Monte-Carlo modelling study. <i>Optics Express</i> , <b>2019</b> , 27, 33683-33699	3.3	2
55	Coating material-dependent differences in modelled lidar-measurable quantities for heavily coated soot particles. <i>Optics Express</i> , <b>2019</b> , 27, 36368-36387	3.3	7
54	Information constraints in variational data assimilation. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2018</b> , 144, 2230-2244	6.4	1
53	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> , <b>2018</b> , 216, 17-36	2.1	14
52	How much information do extinction and backscattering measurements contain about the chemical composition of atmospheric aerosol?. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 3423-3444	6.8	11
51	Disk and circumsolar radiances in the presence of ice clouds. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 6865-6882	6.8	8
50	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> , <b>2017</b> , 25, 24579-24593	3.3	34

49	Coupling aerosol optics to the MATCH (v5.5.0) chemical transport model and the SALSA (v1) aerosol microphysics module. <i>Geoscientific Model Development</i> , <b>2016</b> , 9, 1803-1826	6.3	13
48	Multi-species chemical data assimilation with the Danish Eulerian hemispheric model: system description and verification. <i>Journal of Atmospheric Chemistry</i> , <b>2016</b> , 73, 261-302	3.2	4
47	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> , <b>2016</b> , 178, 22-37	2.1	42
46	Morphological Models for Inhomogeneous Particles: Light Scattering by Aerosols, Cometary Dust, and Living Cells <b>2016</b> , 299-337		2
45	Modelling radiometric properties of inhomogeneous mineral dust particles: Applicability and limitations of effective medium theories. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2015</b> , 152, 16-27	2.1	26
44	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> , <b>2015</b> , 15, 13453-13473	6.8	115
43	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> , <b>2015</b> , 8, 3747-3763	6.3	10
42	Integration of prognostic aerosol-cloud interactions in a chemistry transport model coupled offline to a regional climate model. <i>Geoscientific Model Development</i> , <b>2015</b> , 8, 1885-1898	6.3	6
41	Electromagnetic Wave Scattering on Nonspherical Particles. <i>Springer Series in Optical Sciences</i> , <b>2014</b>	0.5	11
40	Review: Model particles in atmospheric optics. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2014</b> , 146, 41-58	2.1	54
39	Volcanic ash infrared signature: porous non-spherical ash particle shapes compared to homogeneous spherical ash particles. <i>Atmospheric Measurement Techniques</i> , <b>2014</b> , 7, 919-929	4	38
38	Ensemble Perturbations for Chemical Data Assimilation. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , <b>2014</b> , 221-225	0.3	1
37	Evaluation of a Chemical Data Assimilation System. <i>Springer Proceedings in Complexity</i> , <b>2014</b> , 439-444	0.3	
36	T-matrix computations for particles with high-order finite symmetries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2013</b> , 123, 79-91	2.1	7
35	The T-matrix code Tsym for homogeneous dielectric particles with finite symmetries. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2013</b> , 123, 62-78	2.1	20
34	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> , <b>2013</b> , 123, 176-183	2.1	34
33	Impact of dust particle non-sphericity on climate simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2013</b> , 139, 2222-2232	6.4	17
32	Models for integrated and differential scattering optical properties of encapsulated light absorbing carbon aggregates. <i>Optics Express</i> , <b>2013</b> , 21, 7974-93	3.3	53

31	Light scattering by the Martian dust analog, palagonite, modeled with ellipsoids. <i>Optics Express</i> , <b>2013</b> , 21, 17972-85	3.3	14
30	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> , <b>2013</b> , 65, 21155	3.3	2
29	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> , <b>2012</b> , 113, 2356-2367	2.1	38
28	Comparison of scattering by different nonspherical, wavelength-scale particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2012</b> , 113, 2391-2405	2.1	40
27	Sensitivity of the shortwave radiative effect of dust on particle shape: Comparison of spheres and spheroids. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		16
26	A case study on the reciprocity in light scattering computations. <i>Optics Express</i> , <b>2012</b> , 20, 23253-74	3.3	16
25	Optical properties of light absorbing carbon aggregates mixed with sulfate: assessment of different model geometries for climate forcing calculations. <i>Optics Express</i> , <b>2012</b> , 20, 10042-58	3.3	77
24	The influence of observed cirrus microphysical properties on shortwave radiation: A case study over Oklahoma. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		10
23	Modeling optical properties of particles with small-scale surface roughness: combination of group theory with a perturbation approach. <i>Optics Express</i> , <b>2011</b> , 19, 11138-51	3.3	30
22	The European aerosol budget in 2006. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 1117-1139	6.8	50
21	Black carbon fractal morphology and short-wave radiative impact: a modelling study. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 11745-11759	6.8	62
20	Modelling light scattering by mineral dust using spheroids: assessment of applicability. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 5347-5363	6.8	61
19	Can particle shape information be retrieved from light-scattering observations using spheroidal model particles?. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2011</b> , 112, 2213-2225	2.1	60
18	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> , <b>2011</b> , 112, 1815-1824	2.1	27
17	On the Discrepancy between Modeled and Measured Mass Absorption Cross Sections of Light Absorbing Carbon Aerosols. <i>Aerosol Science and Technology</i> , <b>2010</b> , 44, 453-460	3.4	57
16	Electromagnetic scattering by nonspherical particles: Recent advances. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2010</b> , 111, 1788-1790	2.1	14
15	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> , <b>2009</b> , 61, 747-755	3.3	16
14	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> , <b>2008</b> , 109, 1196-1218	2.1	15

13	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> , <b>2008</b> , 60, 753-770	3.3	51
12	Light scattering by particles with boundary symmetries <b>2008</b> , 69-107		2
11	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> , <b>2007</b> , 103, 27-42	2.1	12
10	Mie simulations as an error source in mineral aerosol radiative forcing calculations. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2007</b> , 133, 299-307	6.4	59
9	Poster 17 2D variational data assimilation of near-surface chemical species. <i>Developments in Environmental Science</i> , <b>2007</b> , 6, 787-789		1
8	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> , <b>2006</b> , 265, 383-393	2	8
7	Uncertainties in measured and modelled asymmetry parameters of mineral dust aerosols. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2006</b> , 100, 173-178	2.1	30
6	Light scattering modeling of small feldspar aerosol particles using polyhedral prisms and spheroids. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2006</b> , 101, 471-487	2.1	78
5	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> , <b>2005</b> , 22, 1187-99	1.8	41
4	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> , <b>2005</b> , 110,		62
3	Reproducing the optical properties of fine desert dust aerosols using ensembles of simple model particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , <b>2004</b> , 85, 231-249	2.1	46
2	Requirements for developing a regional monitoring capacity for aerosols in Europe within EMEP. <i>Journal of Environmental Monitoring</i> , <b>2004</b> , 6, 646-55		11
1	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> , <b>2004</b> , 109,		23