

Timo P Nousiainen

List of Publications by Year in descending order

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69
papers

2,834
citations

126907

33
h-index

189892

50
g-index

81
all docs

81
docs citations

81
times ranked

1723
citing authors

#	ARTICLE	IF	CITATIONS
1	On the application of scattering matrix measurements to detection and identification of major types of airborne aerosol particles: volcanic ash, desert dust and pollen. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, , 107761.	2.3	14
2	Climate Models and Remote Sensing Retrievals Neglect Substantial Desert Dust Asphericity. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086592.	4.0	41
3	CITYZER observation network and data delivery system. <i>Geoscientific Instrumentation, Methods and Data Systems</i> , 2020, 9, 397-406.	1.6	0
4	Investigating the size, shape and surface roughness dependence of polarization lidars with light-scattering computations on real mineral dust particles: Application to dust particles' external mixtures and dust mass concentration retrievals. <i>Atmospheric Research</i> , 2018, 203, 44-61.	4.1	22
5	Discussion of a physical optics method and its application to absorbing smooth and slightly rough hexagonal prisms. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 218, 54-67.	2.3	5
6	Disk and circumsolar radiances in the presence of ice clouds. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6865-6882.	4.9	12
7	Morphological Models for Inhomogeneous Particles: Light Scattering by Aerosols, Cometary Dust, and Living Cells. , 2016, , 299-337.		3
8	Mineralogical properties and internal structures of individual fine particles of Saharan dust. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 12397-12410.	4.9	30
9	Modeling the scattering phase matrix of red clays. <i>Optics Letters</i> , 2016, 41, 4879.	3.3	13
10	Optical modeling of volcanic ash particles using ellipsoids. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 4102-4116.	3.3	16
11	Retrieving microphysical properties of dust-like particles using ellipsoids: the case of refractive index. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 11117-11132.	4.9	21
12	Effects of dust particle internal structure on light scattering. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 12011-12027.	4.9	22
13	Parameterization of single-scattering properties of snow. <i>Cryosphere</i> , 2015, 9, 1277-1301.	3.9	36
14	Modelling light scattering by absorbing smooth and slightly rough faceted particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015, 157, 71-80.	2.3	5
15	The impact of surface roughness on scattering by realistically shaped wavelength-scale dust particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015, 150, 55-67.	2.3	39
16	Light scattering by atmospheric mineral dust particles. , 2015, , 3-52.		23
17	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.	3.1	44
18	Modeling radar backscattering from melting snowflakes using spheroids with nonuniform distribution of water. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 133, 504-519.	2.3	12

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19	Review: Model particles in atmospheric optics. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 146, 41-58.	2.3	58
20	TEM analysis of the internal structures and mineralogy of Asian dust particles and the implications for optical modeling. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 7233-7254.	4.9	52
21	Single scattering by realistic, inhomogeneous mineral dust particles with stereogrammetric shapes. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 143-157.	4.9	70
22	Impact of dust particle non-sphericity on climate simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 2222-2232.	2.7	20
23	Light scattering by feldspar particles: Comparison of model agglomerate debris particles with laboratory samples. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 131, 175-187.	2.3	72
24	Experimental and simulated scattering matrices of small calcite particles at 647nm. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 124, 62-78.	2.3	13
25	Linking snowflake microstructure to multi-frequency radar observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 3259-3270.	3.3	29
26	Models for integrated and differential scattering optical properties of encapsulated light absorbing carbon aggregates. <i>Optics Express</i> , 2013, 21, 7974.	3.4	60
27	Light scattering by the Martian dust analog, palagonite, modeled with ellipsoids. <i>Optics Express</i> , 2013, 21, 17972.	3.4	17
28	Retrieving simulated volcanic, desert dust and sea-salt particle properties from two/three-component particle mixtures using UV-VIS polarization lidar and T matrix. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 6757-6776.	4.9	45
29	Applicability of the Rayleigh-Gans approximation for scattering by snowflakes at microwave frequencies in vertical incidence. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 1826-1839.	3.3	25
30	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.	3.4	87
31	Effect of the orientation of the optic axis on simulated scattering matrix elements of small birefringent particles. <i>Optics Letters</i> , 2012, 37, 3252.	3.3	6
32	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.	2.3	45
33	Comparison of scattering by different nonspherical, wavelength-scale particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012, 113, 2391-2405.	2.3	46
34	Sensitivity of the shortwave radiative effect of dust on particle shape: Comparison of spheres and spheroids. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	17
35	Ice-cloud particle habit classification using principal components. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	33
36	Evidence of nonspheroidal behavior in millimeter-wavelength radar observations of snowfall. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	62

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37	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.	3.3	10
38	Modelling light scattering by mineral dust using spheroids: assessment of applicability. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 5347-5363.	4.9	74
39	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.	2.3	69
40	Light scattering by large Saharan dust particles: Comparison of modeling and experimental data for two samples. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 420-433.	2.3	34
41	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.	2.3	32
42	Optical modeling of vesicular volcanic ash particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 1871-1880.	2.3	31
43	Radar Backscattering from Snowflakes: Comparison of Fractal, Aggregate, and Soft Spheroid Models. <i>Journal of Atmospheric and Oceanic Technology</i> , 2011, 28, 1365-1372.	1.3	86
44	Small Irregular Ice Crystals in Tropical Cirrus. <i>Journals of the Atmospheric Sciences</i> , 2011, 68, 2614-2627.	1.7	28
45	Validity criteria of the discrete dipole approximation. <i>Applied Optics</i> , 2010, 49, 1267.	2.1	83
46	Light scattering by coated Gaussian and aggregate particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1398-1410.	2.3	32
47	Modeling λ -band single scattering properties of hydrometeors using discrete-dipole approximation and μ -matrix method. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1654-1664.	2.3	10
48	Optical modeling of mineral dust particles: A review. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1261-1279.	2.3	165
49	Light scattering by Gaussian particles with internal inclusions and roughened surfaces using ray optics. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1628-1639.	2.3	56
50	Single-scattering modeling of thin, birefringent mineral dust flakes using the discrete-dipole approximation. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	44
51	On the Quantitative Low-Level Aerosol Measurements Using Ceilometer-Type Lidar. <i>Journal of Atmospheric and Oceanic Technology</i> , 2009, 26, 2340-2352.	1.3	20
52	Impact of small ice crystal assumptions on ice sedimentation rates in cirrus clouds and GCM simulations. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	106
53	Scattering matrix of large Saharan dust particles: Experiments and computations. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	74
54	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.	2.3	15

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55	Surface-roughness effects on single-scattering properties of wavelength-scale particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 389-397.	2.3	39
56	Scattering of light by roughened Gaussian random particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 604-615.	2.3	65
57	Impact of particle shape on refractive-index dependence of scattering in resonance domain. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 108, 464-473.	2.3	14
58	Mie simulations as an error source in mineral aerosol radiative forcing calculations. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 299-307.	2.7	71
59	Uncertainties in measured and modelled asymmetry parameters of mineral dust aerosols. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 100, 173-178.	2.3	35
60	Light scattering by small feldspar particles simulated using the Gaussian random sphere geometry. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 100, 393-405.	2.3	61
61	Light scattering modeling of small feldspar aerosol particles using polyhedral prisms and spheroids. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 471-487.	2.3	87
62	Spherical and spheroidal model particles as an error source in aerosol climate forcing and radiance computations: A case study for feldspar aerosols. Journal of Geophysical Research, 2005, 110, .	3.3	70
63	Light Scattering by Quasi-Spherical Ice Crystals. Journals of the Atmospheric Sciences, 2004, 61, 2229-2248.	1.7	66
64	Comparison of measured single-scattering matrix of feldspar particles with T-matrix simulations using spheroids. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 79-80, 1031-1042.	2.3	61
65	Light scattering by Gaussian particles: a solution with finite-difference time-domain technique. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 79-80, 1083-1090.	2.3	39
66	Scattering of light by large Saharan dust particles in a modified ray optics approximation. Journal of Geophysical Research, 2003, 108, AAC 12-1.	3.3	76
67	Microwave backscattering by nonspherical ice particles at using second-order perturbation series. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 70, 639-661.	2.3	18
68	Scattering of Light by Raindrops with Single-Mode Oscillations. Journals of the Atmospheric Sciences, 2000, 57, 789-802.	1.7	7
69	Light scattering by Gaussian, randomly oscillating raindrops. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 63, 643-666.	2.3	23