Evgenij S Zubko

List of Publications by Year
in descending order

111	2,816	159585	214800
papers	citations	30 h-index	47 g-index

113	113	113	1432
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Opposition Effect and Negative Polarization of Structural Analogs for Planetary Regoliths. Icarus, 2002, 159, 396-416.	2.5	185
2	Opposition Effect from Clementine Data and Mechanisms of Backscatter. Icarus, 1999, 141, 132-155.	2.5	160
3	Comparison between discrete dipole implementations and exact techniques. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 417-436.	2.3	139
4	Validity criteria of the discrete dipole approximation. Applied Optics, 2010, 49, 1267.	2.1	83
5	COHERENT BACKSCATTERING VERIFIED NUMERICALLY FOR A FINITE VOLUME OF SPHERICAL PARTICLES. Astrophysical Journal, 2012, 760, 118.	4.5	81
6	Light scattering by Gaussian random particles with discrete-dipole approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 360-377.	2.3	73
7	Light scattering by feldspar particles: Comparison of model agglomerate debris particles with laboratory samples. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 131, 175-187.	2.3	72
8	A critical assessment of the Hapke photometric model. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 2431-2456.	2.3	68
9	Scattering of light by roughened Gaussian random particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 604-615.	2.3	65
10	Light scattering in a finite multi-particle system. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2195-2206.	2.3	65
11	Effect of absorption on light scattering by agglomerated debris particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 1741-1749.	2.3	65
12	The F-type asteroids with small inversion angles of polarization. Icarus, 2005, 178, 213-221.	2.5	64
13	The negative polarization of light scattered from particulate surfaces and of independently scattering particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 88, 267-284.	2.3	58
14	Morphological and chemical composition of particulate matter in buses exhaust. Toxicology Reports, 2019, 6, 120-125.	3.3	55
15	Backscattering and negative polarization of agglomerate particles. Optics Letters, 2003, 28, 1504.	3.3	53
16	The positive-polarization of cometary comae. Planetary and Space Science, 2016, 123, 63-76.	1.7	53
17	DDA simulations of light scattering by small irregular particles with various structure. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 416-434.	2.3	51
18	Comparison of scattering by different nonspherical, wavelength-scale particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 2391-2405.	2.3	46

#	Article	IF	Citations
19	Effect of morphology on light scattering by agglomerates. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 150, 42-54.	2.3	45
20	Singleâ€scattering modeling of thin, birefringent mineralâ€dust flakes using the discreteâ€dipole approximation. Journal of Geophysical Research, 2009, 114, .	3.3	44
21	Comet C/2012 S1 (ISON) coma composition at ~4au from HST observations. Planetary and Space Science, 2015, 118, 138-163.	1.7	42
22	Dust in Comet C/1975 V1 (West). Monthly Notices of the Royal Astronomical Society, 2014, 440, 2928-2943.	4.4	41
23	Evaluating the carbon depletion found by the Stardust mission in Comet 81P/Wild 2. Astronomy and Astrophysics, 2012, 544, L8.	5.1	40
24	Interpretation of photo-polarimetric observations of comet 17P/Holmes. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1848-1863.	2.3	39
25	Multispectral polarimetry as a tool to investigate texture and chemistry of lunar regolith particles. Icarus, 2007, 187, 406-416.	2.5	36
26	The Umov effect for single irregularly shaped particles with sizes comparable with wavelength. Icarus, 2011, 212, 403-415.	2.5	35
27	The Effect of Dust Composition and Shape on Radiation-pressure Forces and Blowout Sizes of Particles in Debris Disks. Astronomical Journal, 2019, 157, 157.	4.7	33
28	Discrete dipole approximation simulations of scattering by particles with hierarchical structure. Applied Optics, 2005, 44, 6479.	2.1	31
29	Optical modeling of vesicular volcanic ash particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1871-1880.	2.3	31
30	Particle size effect on the opposition spike and negative polarization. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 394-403.	2.3	30
31	Interrelating angular scattering characteristics to internal electric fields for wavelength-scale spherical particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 520-534.	2.3	30
32	Comet 29P/Schwassmann-Wachmann 1 dust environment from photometric observation at the SOAR Telescope. Icarus, 2019, 319, 58-67.	2.5	29
33	Colour variations of Comet C/2013 UQ4 (Catalina). Monthly Notices of the Royal Astronomical Society, 2017, 469, 2695-2703.	4.4	28
34	Polarization of light backscattered by small particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2193-2212.	2.3	27
35	Light scattering by cometary dust: Large-particle contribution. Earth, Planets and Space, 2013, 65, 139-148.	2.5	25
36	HUBBLE SPACE TELESCOPE PRE-PERIHELION ACS/WFC IMAGING POLARIMETRY OF COMET ISON (C/2012 S1) AT 3.81 AU. Astrophysical Journal Letters, 2014, 780, L32.	8.3	25

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37	On the interpolation of light-scattering responses from irregularly shaped particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 211, 123-128.	2.3	25
38	Rapid variations of dust colour in comet 41P/Tuttleâ€“Giacobiniâ€“KresÃ¡k. Monthly Notices of the Royal Astronomical Society, 2019, 485, 4013-4023.	4.4	25
39	Particle-shape classification using light scattering: An exercise in deep learning. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 231, 140-156.	2.3	25
40	Interpretation of single-particle negative polarization at intermediate scattering angles. Applied Optics, 2010, 49, 5284.	2.1	22
41	Characteristics of cometary dust in the innermost coma derived from polarimetry by Giotto. Monthly Notices of the Royal Astronomical Society, 2013, 430, 1118-1124.	4.4	21
42	Imaging polarimetry and photometry of comet 21P/Giacobini-Zinner. Icarus, 2020, 337, 113471.	2.5	21
43	On the Small Contribution of Supermicron Dust Particles to Light Scattering by Comets. Astrophysical Journal, 2020, 895, 110.	4.5	20
44	Sh-matrices method as applied to scattering by particles with layered structure. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 437-454.	2.3	19
45	Modeling light scattering by forsterite particles. Optics Letters, 2015, 40, 1204.	3.3	19
46	On the reflectance of dust in comets. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 202, 104-113.	2.3	17
47	Response to the comment by B. Hapke on â€œA critical assessment of the Hapke photometric modelâ€• Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 116, 191-195.	2.3	16
48	Retrieval of dust-particle refractive index using the phenomenon of negative polarization. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 151, 38-42.	2.3	16
49	Backscatter of agglomerate particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 88, 163-171.	2.3	15
50	Mixing rules and morphology dependence of the scatterer. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 150, 68-75.	2.3	15
51	Absolute magnitude of small cosmic dust particles. Monthly Notices of the Royal Astronomical Society, 2020, 492, 810-820.	4.4	15
52	Reflectance of micron-sized dust particles retrieved with the Umov law. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 190, 1-6.	2.3	14
53	Coherent backscattering effect for non-zero elements of Mueller matrix of discrete media at different illuminationâ€“observation geometries. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 89, 443-452.	2.3	13
54	Collective effects by agglomerated debris particles in the backscatter. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 100, 489-495.	2.3	13

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55	Experimental and simulated scattering matrices of small calcite particles at 647nm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 124, 62-78.	2.3	13
56	Optical measurements of chemically heterogeneous particulate surfaces. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 178, 422-431.	2.3	13
57	A photometric function of planetary surfaces for gourmets. Icarus, 2018, 302, 213-236.	2.5	13
58	Interrelating scattering characteristics to internal electric fields for Gaussian-random-sphere particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2207-2218.	2.3	12
59	Umov effect in single-scattering dust particles: effect of irregular shape. Optics Letters, 2017, 42, 1962.	3.3	12
60	Light scattering from volcanic-sand particles in deposited and aerosol form. Atmospheric Environment, 2019, 215, 116813.	4.1	12
61	Monitoring polarization in comet 46P/Wirtanen. Monthly Notices of the Royal Astronomical Society, 2020, 498, 1814-1825.	4.4	12
62	Polarization of disintegrating Comet C/2019 Y4 (ATLAS). Monthly Notices of the Royal Astronomical Society, 2020, 497, 1536-1542.	4.4	12
63	Polarimetric weak-localization effect in scattering of natural light in the region of small phase angles. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2002, 92, 443-448.	0.6	11
64	Polarimetric mapping of the Moon at a phase angle near the polarization minimum. Icarus, 2008, 198, 1-6.	2.5	11
65	Comet 9P/Tempel 1: Interpretation with theDeep ImpactResults. Astrophysical Journal, 2008, 673, L199-L202.	4.5	11
66	Formation of Dusty Plasma Clouds at Meteoroid Impact on the Surface of the Moon. JETP Letters, 2018, 108, 356-363.	1.4	11
67	Decimeter-scale particle characterization in the coma of 73P/Schwassmann-Wachmann 3 using dual-wavelength radar observations. Icarus, 2019, 325, 94-104.	2.5	11
68	Where is the machine looking? Locating discriminative light-scattering features by class-activation mapping. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 247, 106936.	2.3	11
69	Scattering parameterization for interpreting asteroid polarimetric and photometric phase effects. Earth, Planets and Space, 2010, 62, 47-52.	2.5	10
70	The Umov effect in application to an optically thin two-component cloud of cosmic dust. Monthly Notices of the Royal Astronomical Society, 2018, 477, 4866-4873.	4.4	10
71	Umov effect in asteroid (3200) Phaethon. Astronomy and Astrophysics, 2018, 620, A179.	5.1	10
72	Detection of impact-produced dust clouds near the lunar terminator. Planetary and Space Science, 2019, 177, 104689.	1.7	10

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73	Scattering Properties of Planetary Regoliths Near Opposition. , 2004, , 191-208.		10
74	Light scattering by composite particles comparable with wavelength and their approximation by systems of spheres. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2001, 91, 273-277.	0.6	9
75	Optimizing the discrete-dipole approximation for sequences of scatterers with identical shapes but differing sizes or refractive indices. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 100, 288-294.	2.3	9
76	Q-space analysis of scattering by small irregular particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 99-105.	2.3	9
77	Vertical profile of polarization over Vladivostok using horizon shadowing: Clues to understanding the altitude variation of reflectance of aerosol particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 94-102.	2.3	9
78	Coating effect on light scattering by irregularly shaped particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 215, 71-76.	2.3	9
79	Extremely low linear polarization of comet C/2018 V1 (Machholzâ€“Fujikawaâ€“Iwamoto). Icarus, 2020, 336, 113453.	2.5	9
80	Computational study of the sensitivity of laser light scattering particle sizing to refractive index and irregularity. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 241, 106745.	2.3	9
81	Discrete-dipole analysis of backscatter features of agglomerated debris particles comparable in size with wavelength. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 100, 483-488.	2.3	8
82	Interpretation of similarity in the negative polarization of comets and C-type asteroids in terms of common properties of asteroidal and cometary dust. Earth, Planets and Space, 2011, 63, 1077-1085.	2.5	8
83	Light scattering by random irregular particles of two classes of shape. Optics Letters, 2014, 39, 6723.	3.3	8
84	Resolving color differences of comet 41P/Tuttle-Giacobini-KresÃ¡k. Astronomy and Astrophysics, 2020, 642, L5.	5.1	8
85	Monitoring the negative polarization in Comet 29P/Schwassmannâ€“Wachmann during quiescence. Icarus, 2021, 366, 114536.	2.5	8
86	Coherent backscattering in planetary regoliths. , 2010, , 477-518.		8
87	Comment on â€œModeling of opposition effects with ensembles of clusters: Interplay of various scattering mechanismsâ€•by Elena V. Petrova, Victor P. Tishkovets, Klaus Jockers, 2007 [Icarus 188, 233â€“245]. Icarus, 2008, 194, 850-852.	2.5	7
88	Revisiting the particle-size constraint of the 10-Î¼m silicate feature. Icarus, 2020, 350, 113907.	2.5	7
89	Light scattering by irregularly shaped particles with sizes comparable to the wavelength. , 2012, , 39-74.		7
90	Velocity of Dust Ejected from Interstellar Comet 2I/Borisov. Research Notes of the AAS, 2019, 3, 152.	0.7	7

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91	Effect of the orientation of the optic axis on simulated scattering matrix elements of small birefringent particles. Optics Letters, 2012, 37, 3252.	3.3	6
92	Comet C/2011 J2 (LINEAR): Photometry and stellar transit. Planetary and Space Science, 2016, 122, 26-37.	1.7	6
93	Active remote sensing of atmospheric dust using relationships between their depolarization ratios and reflectivity. Optics Letters, 2021, 46, 2352.	3.3	6
94	On the Ambiguous Definition of the Degree of Linear Polarization. Research Notes of the AAS, 2019, 3, 45.	0.7	6
95	Stumbling over Planetary Building Blocks: AU Microscopii as an Example of the Challenge of Retrieving Debris-disk Dust Properties. Astrophysical Journal, 2022, 930, 123.	4.5	6
96	Calculation of the scattering indicatrix of systems of spheres based on the dimensionless formulation of the solution of the mie problem. Optics and Spectroscopy (English Translation of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5	0.6	5
97	Phase-ratio imaging as applied to desert sands for tracking human presence. Applied Optics, 2017, 56, B184.	2.1	4
98	Interpolating light-scattering properties of irregularly shaped, absorbing particles. Optics Letters, 2018, 43, 4308.	3.3	4
99	Technical note: A simple method for retrieval of dust aerosol optical depth with polarized reflectance over oceans. Atmospheric Chemistry and Physics, 2019, 19, 15583-15586.	4.9	4
100	Backscattering of agglomerate particles. , 2004, , .		3
101	Interpreting lunar polarimetric anomalies at large phase angles. Icarus, 2017, 296, 117-122.	2.5	3
102	Radar backscattering from a large-grain cometary coma: numerical simulation. Astronomy and Astrophysics, 2017, 608, A20.	5.1	3
103	Modeling polarized solar radiation from a snow surface for correction of polarization-induced error in satellite data. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 222-223, 154-169.	2.3	3
104	Mapping the Moon in Pmin. , 2007, , .		2
105	Clues to Understanding the Microphysics of Dust in the Interstellar Comet C/2019 Q4 (Borisov). Research Notes of the AAS, 2019, 3, 138.	0.7	2
106	Dust in Comet 67P/Churyumovâ€“Gerasimenko: Interrelation between in situ Findings by Rosetta and Ground-based Polarimetry. Research Notes of the AAS, 2021, 5, 68.	0.7	1
107	Blue Coma and Red Surface of 174P/Echeclus: Two Sides of the Same Coin?. Research Notes of the AAS, 2020, 4, 75.	0.7	1
108	Polarimeter based on video matrix. , 2017, , .		0

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109	Optical properties of aerosol during condensation growth: numerical study. , 2017, , .		0
110	Prepare for Impact!. Research Notes of the AAS, 2022, 6, 39.	0.7	0
111	On the dust production of active asteroid (3200) Phaethon in 2009: What the DESTINY+ spaceprobe could encounter. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, , 108224.	2.3	0