Maxim A Yurkin

List of Publications by Year
in descending order

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89 papers	3,231 citations	236925 25 h-index	149698 56 g-index
93 all docs	93 docs citations	93 times ranked	2162 citing authors

#	Article	IF	Citations
1	Uniform-over-size approximation of the internal fields for scatterers with low refractive-index contrast. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107965.	2.3	6
2	Rigorous analysis of the spectral sizing of single particles based on light scattering patterns. Optics and Laser Technology, 2022, 151, 108047.	4.6	7
3	A point electric dipole: From basic optical properties to the fluctuationâ€“dissipation theorem. Reviews in Physics, 2021, 6, 100047.	8.9	6
4	Singleâ€Particle Characterization by Elastic Light Scattering. Laser and Photonics Reviews, 2021, 15, 2000368.	8.7	21
5	How much is enough? The convergence of finite sample scattering properties to those of infinite media. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 262, 107524.	2.3	10
6	Can light absorption of black carbon still be enhanced by mixing with absorbing materials?. Atmospheric Environment, 2021, 253, 118358.	4.1	13
7	Capabilities of the ADDA Code for Electromagnetic Simulations. , 2021, , .		0
8	Broadband multimodal THz waveguides for efficient transfer of high-power radiation in space-confined conditions. Optics and Laser Technology, 2021, 143, 107375.	4.6	2
9	Electron-energy-loss spectroscopy and cathodoluminescence for particles inside substrate. Journal of Physics: Conference Series, 2021, 2015, 012064.	0.4	1
10	Co- and counter-propagating wave effects in an absorbing medium. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106688.	2.3	6
11	Capabilities of ADDA code for nanophotonics. Journal of Physics: Conference Series, 2020, 1461, 012197.	0.4	1
12	Simulating optical properties of extremely oblate inhomogeneous particles with the discrete dipole approximation. Journal of Physics: Conference Series, 2020, 1461, 012198.	0.4	0
13	Polarizability and fluctuation-dissipation theorem for a point dipole: Does shape matter?. AIP Conference Proceedings, 2020, , .	0.4	0
14	Behavior of the Lorenz-Mie poles in the complex space of sphere parameters. AIP Conference Proceedings, 2020, , .	0.4	0
15	Electron energy loss spectroscopy in the framework of the discrete dipole approximation. AIP Conference Proceedings, 2020, , .	0.4	1
16	Implementation of various Bessel beams in the framework of the discrete dipole approximation. AIP Conference Proceedings, 2020, , .	0.4	2
17	Sensitive detection and estimation of particle non-sphericity from the complex Fourier spectrum of its light-scattering profile. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 235, 317-331.	2.3	12
18	Energy budget and optical theorem for scattering of source-induced fields. Physical Review A, 2019, 99, .	2.5	22

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19	Reproducing the morphology-dependent resonances of spheres with the discrete dipole approximation. Optics Express, 2019, 27, 22827.	3.4	11
20	Additivity of integral optical cross sections for a fixed tenuous multi-particle group. Optics Letters, 2019, 44, 419.	3.3	11
21	Scattering of a damped inhomogeneous plane wave by a particle in a weakly absorbing medium. OSA Continuum, 2019, 2, 2362.	1.8	4
22	Chylomicrons against light scattering: The battle for characterization. Journal of Biophotonics, 2018, 11, e201700381.	2.3	12
23	Volume integral equation for electromagnetic scattering: Rigorous derivation and analysis for a set of multilayered particles with piecewise-smooth boundaries in a passive host medium. Physical Review A, 2018, 97, .	2.5	31
24	How a phase image of a cell with nucleus refractive index smaller than that of the cytoplasm should look like?. Journal of Biophotonics, 2018, 11, e201800033.	2.3	8
25	Impressed sources and fields in the volume-integral-equation formulation of electromagnetic scattering by a finite object: A tutorial. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 214, 158-167.	2.3	18
26	Performance of the discrete dipole approximation for optical properties of black carbon aggregates. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 221, 98-109.	2.3	19
27	Far-field Lorenzâ€“Mie scattering in an absorbing host medium. II: Improved stability of the numerical algorithm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 217, 274-277.	2.3	16
28	Calibrationâ€free quantitative immunoassay by flow cytometry: Theoretical consideration and practical implementation for IgG antibody binding to CD14 receptors on human leukocytes. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2018, 93, 695-705.	1.5	2
29	Addendum to â€œImpressed sources and fields in the volume-integral-equation formulation of electromagnetic scattering by a finite object: A tutorialâ€•[J. Quant. Spectrosc. Radiat. Transfer 214 (2018) 158â€“167]. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 219, 105-107.	2.3	2
30	Nuclear apoptotic volume decrease in individual cells: Confocal microscopy imaging and kinetic modeling. Journal of Theoretical Biology, 2018, 454, 60-69.	1.7	1
31	Method for the simulation of blood platelet shape and its evolution during activation. PLoS Computational Biology, 2018, 14, e1005899.	3.2	13
32	Advanced consumableâ€free morphological analysis of intact red blood cells by a compact scanning flow cytometer. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 867-873.	1.5	23
33	ISLH 2017 Abstract Proceedings. International Journal of Laboratory Hematology, 2017, 39, 3-133.	1.3	0
34	Spectral solution of the inverse Mie problem. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 200, 280-294.	2.3	11
35	Kinetic turbidimetry of patchy colloids aggregation: Latex particles immunoagglutination. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 516, 72-79.	4.7	3
36	On the concept of random orientation in far-field electromagnetic scattering by nonspherical particles. Optics Letters, 2017, 42, 494.	3.3	71

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37	Mature red blood cells: from optical model to inverse light-scattering problem. Biomedical Optics Express, 2016, 7, 1305.	2.9	24
38	Corrigendum to â€œThe discrete dipole approximation: An overview and recent developmentsâ€•[J. Quant. Spectrosc. Radiat. Transfer 106 (2007) 558â€“589]. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 171, 82-83.	2.3	8
39	First-principles modeling of electromagnetic scattering by discrete and discretely heterogeneous random media. Physics Reports, 2016, 632, 1-75.	25.6	104
40	Capabilities of the discrete dipole approximation for large particle systems. , 2016, , .		2
41	Performance of iterative solvers in the discrete dipole approximation. , 2016, , .		4
42	A physical model of blood platelets shape and its effect on light scattering. , 2016, , .		0
43	Light scattering into two fixed angles vs. angle-resolved measurements for characterization of single submicron particles. , 2016, , .		0
44	Light-scattering gating and characterization of plasma microparticles. Journal of Biomedical Optics, 2016, 21, 115003.	2.6	10
45	Fluorescenceâ€free flow cytometry for measurement of shape index distribution of resting, partially activated, and fully activated platelets. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2016, 89, 1010-1016.	1.5	17
46	Superâ€resolved calibrationâ€free flow cytometric characterization of platelets and cellâ€derived microparticles in plateletâ€rich plasma. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2016, 89, 159-168.	1.5	28
47	Influence of magnesium sulfate on HCO 3 /Cl transmembrane exchange rate in human erythrocytes. Journal of Theoretical Biology, 2016, 393, 194-202.	1.7	12
48	Erratum to Dynamic quantification of antigen molecules with flow cytometry [Journal of Immunological Methods, Volume 418, March 2015, Pages 66â€“74]. Journal of Immunological Methods, 2015, 427, 138.	1.4	0
49	Rigorous and Fast Discrete Dipole Approximation for Particles near a Plane Interface. Journal of Physical Chemistry C, 2015, 119, 29088-29094.	3.1	37
50	Rectangular dipoles in the discrete dipole approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 156, 67-79.	2.3	38
51	Dynamic quantification of antigen molecules with flow cytometry. Journal of Immunological Methods, 2015, 418, 66-74.	1.4	9
52	Time-domain discrete-dipole approximation for simulation of temporal response of plasmonic nanoparticles. Optics Express, 2015, 23, 15555.	3.4	13
53	Additivity of light-scattering patterns of aggregated biological particles. Journal of Biomedical Optics, 2014, 19, 085004.	2.6	13
54	Comparison of the pseudo-spectral time domain method and the discrete dipole approximation for light scattering by ice spheres. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 146, 402-409.	2.3	14

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55	Size-dependent optical properties of polyethylene powders in far-IR region: On the way to universal matrix. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 147, 1-7.	2.3	3
56	Comment on â€œPlasmonic nanoparticle monomers and dimers: from nanoantennas to chiral metamaterialsâ€•by Chigrin et al. in Appl Phys B (2011) 105:81â€“97. Applied Physics B: Lasers and Optics, 2014, 114, 601-602.	2.2	0
57	Brownian aggregation rate of colloid particles with several active sites. Journal of Chemical Physics, 2014, 141, 064309.	3.0	10
58	Comment on â€œRapid and Efficient Prediction of Optical Extinction Coefficients for Gold Nanospheres and Gold Nanorodsâ€• Journal of Physical Chemistry C, 2014, 118, 21738-21739.	3.1	1
59	Enhanced characterisation of milk fat globules by their size, shape and refractive index with scanning flow cytometry. International Dairy Journal, 2014, 39, 316-323.	3.0	19
60	Accurate measurement of volume and shape of resting and activated blood platelets from light scattering. Journal of Biomedical Optics, 2013, 18, 017001.	2.6	45
61	Light scattering by a cube: Accuracy limits of the discrete dipole approximation and the T-matrix method. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 123, 176-183.	2.3	42
62	Symmetry relations for the Mueller scattering matrix integrated over the azimuthal angle. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 131, 82-87.	2.3	5
63	An optimization method for solving the inverse Mie problem based on adaptive algorithm for construction of interpolating database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 131, 202-214.	2.3	9
64	Highâ€precision characterization of individual E. coli cell morphology by scanning flow cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2013, 83A, 568-575.	1.5	30
65	Comparison between the pseudo-spectral time domain method and the discrete dipole approximation for light scattering simulations. Optics Express, 2012, 20, 16763.	3.4	49
66	Challenges in simulation of optical properties of metallic nanoparticles using the discrete dipole approximation. , 2012, , .		1
67	A case study on the reciprocity in light scattering computations. Optics Express, 2012, 20, 23253.	3.4	16
68	An optimization method with precomputed starting points for solving the inverse Mie problem. Inverse Problems, 2012, 28, 045012.	2.0	6
69	Light-scattering flow cytometry for identification and characterization of blood microparticles. Journal of Biomedical Optics, 2012, 17, 057006.	2.6	47
70	The discrete-dipole-approximation code ADDA: Capabilities and known limitations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2234-2247.	2.3	539
71	Comparison of the discrete dipole approximation and the discrete source method for simulation of light scattering by red blood cells. Optics Express, 2010, 18, 5681.	3.4	23
72	Application of the discrete dipole approximation to very large refractive indices: Filtered coupled dipoles revived. Physical Review E, 2010, 82, 036703.	2.1	71

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73	Accuracy of the discrete dipole approximation for simulation of optical properties of gold nanoparticles. Journal of Nanophotonics, 2010, 4, 041585.	1.0	56
74	Is there a difference between T- and B-lymphocyte morphology?. Journal of Biomedical Optics, 2009, 14, 064036.	2.6	71
75	Light scattering by neutrophils: model, simulation, and experiment. Journal of Biomedical Optics, 2008, 13, 054057.	2.6	30
76	Discrimination of granulocyte subtypes from light scattering: theoretical analysis using a granulated sphere model. Optics Express, 2007, 15, 16561.	3.4	18
77	Systematic comparison of the discrete dipole approximation and the finite difference time domain method for large dielectric scatterers. Optics Express, 2007, 15, 17902.	3.4	71
78	OPTICS OF ERYTHROCYTES. , 2007, , 243-259.		10
79	Comparison between discrete dipole implementations and exact techniques. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 417-436.	2.3	139
80	The discrete dipole approximation for simulation of light scattering by particles much larger than the wavelength. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 546-557.	2.3	235
81	The discrete dipole approximation: An overview and recent developments. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 558-589.	2.3	721
82	OPTICS OF LEUCOCYTES. , 2007, , 269-280.		6
83	Convergence of the discrete dipole approximation I Theoretical analysis. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2578.	1.5	59
84	Convergence of the discrete dipole approximation II An extrapolation technique to increase the accuracy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2592.	1.5	44
85	Absorption and scattering properties of arbitrarily shaped particles in the Rayleigh domain. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 97, 161-180.	2.3	29
86	Determination of volume, shape and refractive index of individual blood platelets. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 102, 37-45.	2.3	39
87	Experimental and theoretical study of light scattering by individual mature red blood cells by use of scanning flow cytometry and a discrete dipole approximation. Applied Optics, 2005, 44, 5249.	2.1	71
88	Kinetics of the initial stage of immunoagglutionation studied with the scanning flow cytometer. Colloids and Surfaces B: Biointerfaces, 2003, 32, 245-255.	5.0	11
89	Kinetic study of the initial stages of agglutination process with scanning flow cytometer. , 2003, , .		0