Valeri P Maltsev

List of Publications by Year
in descending order

76	1,706	279798 23	315739 38
papers	citations	h-index	g-index

79	79	79	1105
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	Scanning flow cytometry for individual particle analysis. Review of Scientific Instruments, 2000, 71, 243-255.	1.3	118
3	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
4	Is there a difference between T- and B-lymphocyte morphology?. Journal of Biomedical Optics, 2009, 14, 064036.	2.6	71
5	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
6	Light-scattering flow cytometry for identification and characterization of blood microparticles. Journal of Biomedical Optics, 2012, 17, 057006.	2.6	47
7	Erythrocyte lysis in isotonic solution of ammonium chloride: Theoretical modeling and experimental verification. Journal of Theoretical Biology, 2008, 251, 93-107.	1.7	46
8	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
9	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
10	Light-scattering properties of individual erythrocytes. Applied Optics, 1999, 38, 230.	2.1	43
11	Single-particle sizing from light scattering by spectral decomposition. Applied Optics, 2004, 43, 5110.	2.1	42
12	Measurement of scattering properties of individual particles with a scanning flow cytometer. Applied Optics, 1995, 34, 6301.	2.1	41
13	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
14	Polarized lightâ€scattering profileâ€”advanced characterization of nonspherical particles with scanning flow cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2011, 79A, 570-579.	1.5	39
15	Particle classification from light scattering with the scanning flow cytometer. , 1999, 37, 215-220.		37
16	Calibration-free method to determine the size and hemoglobin concentration of individual red blood cells from light scattering. Applied Optics, 2000, 39, 5884.	2.1	32
17	A new design of the flow cuvette and optical set-up for the scanning flow cytometer. , 1998, 31, 78-84.		31
18	IndividualEscherichia coli cells studied from light scattering with the scanning flow cytometer. Cytometry, 2000, 41, 41-45.	1.8	30

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19	Light scattering by neutrophils: model, simulation, and experiment. Journal of Biomedical Optics, 2008, 13, 054057.	2.6	30
20	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
21	Characterisation of Bio-Particles from Light Scattering. , 2004, , .		29
22	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
23	Parametric solution of the inverse light-scattering problem for individual spherical particles. Applied Optics, 1997, 36, 6102.	2.1	27
24	Absolute real-time measurement of particle size distribution with the flying light-scattering indicatrix method. Applied Optics, 1996, 35, 3275.	2.1	26
25	Mature red blood cells: from optical model to inverse light-scattering problem. Biomedical Optics Express, 2016, 7, 1305.	2.9	24
26	A study of light scattering of mononuclear blood cells with scanning flow cytometry. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 102, 121-128.	2.3	23
27	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
28	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
29	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
30	Discrimination of granulocyte subtypes from light scattering: theoretical analysis using a granulated sphere model. Optics Express, 2007, 15, 16561.	3.4	18
31	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
32	Characterization of spherical particles using high-order neural networks and scanning flow cytometry. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 102, 62-72.	2.3	16
33	Absolute real-time determination of size and refractive index of individual microspheres. Measurement Science and Technology, 1997, 8, 1023-1027.	2.6	13
34	Additivity of light-scattering patterns of aggregated biological particles. Journal of Biomedical Optics, 2014, 19, 085004.	2.6	13
35	Method for the simulation of blood platelet shape and its evolution during activation. PLoS Computational Biology, 2018, 14, e1005899.	3.2	13
36	Resonant tow-photon ionization detection of atomic iodine resulting from photodissociation of allyl iodide under vibrational (C-H overtone) excitation. Chemical Physics, 1994, 184, 357-363.	1.9	12

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37	Estimation of morphological characteristics of single particles from light scattering data in flow cytometry. Russian Chemical Bulletin, 1994, 43, 1115-1124.	1.5	12
38	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
39	Chylomicrons against light scattering: The battle for characterization. Journal of Biophotonics, 2018, 11, e201700381.	2.3	12
40	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
41	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
42	Scanning flow cytometer modified to distinguish phytoplankton cells from their effective size, effective refractive index, depolarization, and fluorescence. Applied Optics, 2008, 47, 4405.	2.1	11
43	Spectral solution of the inverse Mie problem. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 200, 280-294.	2.3	11
44	Spectral approach to recognize spherical particles among non-spherical ones by angle-resolved light scattering. Optics and Laser Technology, 2021, 135, 106700.	4.6	11
45	OPTICS OF ERYTHROCYTES. , 2007, , 243-259.		10
46	Brownian aggregation rate of colloid particles with several active sites. Journal of Chemical Physics, 2014, 141, 064309.	3.0	10
47	Light-scattering gating and characterization of plasma microparticles. Journal of Biomedical Optics, 2016, 21, 115003.	2.6	10
48	Extrema in the light-scattering indicatrix of a homogeneous sphere. Journal of Optics, 1999, 1, 448-453.	1.5	9
49	Mathematical Modeling the Kinetics of Cell Distribution in the Process of Ligandâ€“Receptor Binding. Journal of Theoretical Biology, 2000, 206, 407-417.	1.7	9
50	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
51	Dynamic quantification of antigen molecules with flow cytometry. Journal of Immunological Methods, 2015, 418, 66-74.	1.4	9
52	The scanning flow cytometer modified for measurement of two-dimensional light-scattering pattern of individual particles. Measurement Science and Technology, 2008, 19, 015408.	2.6	8
53	Blood platelet quantification by light scattering: from morphology to activation. Analytical Methods, 2021, 13, 3233-3241.	2.7	8
54	Distribution function approach to the study of the kinetics of IgM antibody binding to FcÎ³RIIIb (CD16b) receptors on neutrophils by flow cytometry. Journal of Theoretical Biology, 2011, 290, 1-6.	1.7	7

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55	Erythrocyte lysis and angleâ€resolved light scattering measured by scanning flow cytometry result to 48 indices quantifying a gas exchange function of the human organism. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2022, , .	1.5	7
56	A Model of Complete Classical Treatment of Dispersion Radical Polymerization Kinetics. Macromolecules, 1998, 31, 6455-6460.	4.8	6
57	A Nonfitting Method Using a Spatial Sine Window Transform for Inhomogeneous Effective-Diffusion Measurements by FRAP. Biophysical Journal, 2011, 100, 507-516.	0.5	6
58	An optimization method with precomputed starting points for solving the inverse Mie problem. Inverse Problems, 2012, 28, 045012.	2.0	6
59	Ultimate peculiarity in angular spectrum enhances the parametric solution of the inverse Mie problem. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 235, 204-208.	2.3	6
60	Dual-wavelength angle-resolved light scattering used in the analysis of particles by scanning flow cytometry. Journal of Optics (United Kingdom), 2021, 23, 105606.	2.2	6
61	OPTICS OF LEUCOCYTES. , 2007, , 269-280.		6
62	Pumpâ€“probe femtosecond-laser VUV REMPI technique applied to the study of highly excited states of allyl iodide. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 1681-1682.	1.7	5
63	Analysis of Sub-Micron Spherical Particles using Scanning Flow Cytometry. Particle and Particle Systems Characterization, 2000, 17, 225-229.	2.3	3
64	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
65	Kinetic turbidimetry of patchy colloids aggregation: Latex particles immunoagglutination. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 516, 72-79.	4.7	3
66	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
67	Light scattering and fluorescence of single particles measured by a scanning flow cytometer. , 1995, , .		1
68	<title>Kinetics of the accumulation of aluminum(III)-sulfophthalocyanine by human leukocytes measured with a scanning flow cytometer</title>. , 2000, , .		1
69	Nuclear apoptotic volume decrease in individual cells: Confocal microscopy imaging and kinetic modeling. Journal of Theoretical Biology, 2018, 454, 60-69.	1.7	1
70	Proposed Dynamics of CDB3 Activation in Human Erythrocytes by Nifedipine Studied with Scanning Flow Cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 1275-1284.	1.5	1
71	FRAP Analysis of Proteins Diffusion and Binding in Inhomogeneous Media. Biophysical Journal, 2012, 102, 48a.	0.5	0
72	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

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73	Light scattering into two fixed angles vs. angle-resolved measurements for characterization of single submicron particles. , 2016, , .		0
74	Light-scattering properties of bacteria and cells measured with Scanning Flow Cytometry. , 1999, , .		0
75	Light-scattering properties of E.coli and E.coli infected by phage. , 1999, , .		0
76	OPTICS OF PLATELETS. , 2007, , 261-267.		0