Leonardo AndrÃ© Ambrosio

List of Publications by Year
in descending order

90 papers	1,117 citations	361413 20 h-index	477307 29 g-index
91 all docs	91 docs citations	91 times ranked	219 citing authors

#	Article	IF	Citations
1	Optical forces and optical force categorizations on small magnetodielectric particles in the framework of generalized Lorenz-Mie theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 279, 108046.	2.3	7
2	The generalized Lorenz-Mie theory and its identification with the dipole theory of forces for particles with electric and magnetic properties. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 281, 108104.	2.3	5
3	Hermiteâ€“Gaussian beams in the generalized Lorenzâ€“Mie theory through finiteâ€“series Laguerreâ€“Gaussian beam shape coefficients. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 1027.	2.1	7
4	Interactions between arbitrary electromagnetic shaped beams and circular and elliptical infinite cylinders: A review. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 286, 108181.	2.3	3
5	Angular spectrum representation of the Bessel-Gauss beam and its approximation: A comparison with the localized approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 284, 108167.	2.3	16
6	Towards photophoresis with the generalized Lorenz-Mie theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 288, 108266.	2.3	3
7	Axicon optical forces and other kinds of transverse optical forces exerted by off-axis Bessel beams in the Rayleigh regime in the framework of generalized Lorenz-Mie theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 258, 107356.	2.3	15
8	Simulations of optical forces by a microstructured continuous superposition of first-order nonparaxial Bessel beams on Rayleigh particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 261, 107481.	2.3	3
9	On longitudinal radiation pressure cross-sections in the generalized Lorenzâ€“Mie theory and their numerical relationship with the dipole theory of forces. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 825.	2.1	13
10	Surface beams resistant to diffraction and attenuation and structured at the millimeter scale. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 677.	2.1	7
11	Finite series algorithm design for lens-focused Laguerreâ€“Gauss beams in the generalized Lorenzâ€“Mie theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 261, 107488.	2.3	12
12	On transverse radiation pressure cross-sections in the generalized Lorenzâ€“Mie theory and their numerical relationship with the dipole theory of forces. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 261, 107491.	2.3	10
13	On the Rayleigh limit of the generalized Lorenzâ€“Mie theory and its formal identification with the dipole theory of forces. I. The longitudinal case. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 262, 107531.	2.3	14
14	Rayleigh limit of generalized Lorenz-Mie theory for on-axis beams and its relationship with the dipole theory of forces. Part I: Non dark axisymmetric beams of the first kind, with the example of Gaussian beams. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 266, 107569.	2.3	12
15	On the Rayleigh limit of the generalized Lorenz-Mie theory and its formal identification with the dipole theory of forces. II. The transverse case.. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 266, 107591.	2.3	10
16	Theoretical prediction of photophoretic force on a dielectric sphere illuminated by a circularly symmetric high-order Bessel beam: on-axis case. Optics Express, 2021, 29, 26894.	3.4	13
17	Rayleigh limit of generalized Lorenz-Mie theory: Axicon terms revisited. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107691.	2.3	3
18	Poynting vector and beam shape coefficients: On new families of symmetries (non-dark axisymmetric) Tj ETQq0 0 0 rgBT /Overlock 10 T Radiative Transfer, 2021, 271, 107745.	2.3	5

#	Article	IF	Citations
19	Rayleigh limit of generalized Lorenz-Mie theory for on-axis beams and its relationship with the dipole theory of forces. Part II: Non-dark axisymmetric beams of the second kind and dark axisymmetric beams, including a review. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 273, 107836.	2.3	7
20	Generalized Lorenz-Mie theory in the analysis of longitudinal photophoresis of arbitrary-index particles: On-axis axisymmetric beams of the first kind. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 275, 107889.	2.3	8
21	On an infinite number of quadratures to evaluate beam shape coefficients in generalized Lorenz-Mie theory and the extended boundary condition method for structured EM beams. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106779.	2.3	21
22	Finite series expressions to evaluate the beam shape coefficients of a Laguerre-Gauss beam focused by a lens in an on-axis configuration. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106759.	2.3	12
23	Axicon terms associated with gradient optical forces in generalized Lorenz-Mie theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 257, 107260.	2.3	8
24	Bessel-Gauss beams in the generalized Lorenz-Mie theory using three remodeling techniques. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 256, 107292.	2.3	23
25	Photophoresis in the slip-flow and free molecular regimes for arbitrary-index particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 255, 107276.	2.3	15
26	Modified finite series technique for the evaluation of beam shape coefficients in the T-matrix methods for structured beams with application to Bessel beams. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 248, 107007.	2.3	7
27	Arrays of spatially structured non-diffracting optical beams. Applied Optics, 2020, 59, 346.	1.8	4
28	Hollow Bessel beams for guiding atoms between vacuum chambers: a proposal and efficiency study. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 2660.	2.1	1
29	Experimental optical trapping with frozen waves. Optics Letters, 2020, 45, 2514.	3.3	46
30	Evaluation of beam shape coefficients of paraxial Laguerreâ€“Gauss beam freely propagating by using three remodeling methods. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 239, 106618.	2.3	27
31	Finite series expressions to evaluate the beam shape coefficients of a Laguerreâ€“Gauss beam freely propagating.. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 227, 12-19.	2.3	29
32	Semantic Web-based System for Light Scattering Using the Generalized Lorenz-Mie Theory. , 2019, , .		0
33	Constructing Millimeter-structured Surface Beams from Nondiffracting Zeroth-order Bessel Beams in Lossless Media. , 2019, , .		1
34	A Simple Method for the Design of Millimeter-structured Inclined Beams: Inclined Superpositions of Zeroth-order Bessel Beams. , 2019, , .		1
35	On a New Type of Micrometer-Structured Non-Diffracting Wave Field: Surface Beams Based on Continuous Superpositions of Zeroth-Order Bessel Beams. , 2019, , .		1
36	Zeroth-order continuous vector frozen waves for light scattering: exact multipole expansion in the generalized Lorenzâ€“Mie theory. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 81.	2.1	18

#	Article	IF	Citations
37	Millimeter-structured nondiffracting surface beams. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 638.	2.1	19
38	Bessel-Gauss Beam Description in the Generalized Lorenz-Mie Theory: The Finite Series Method. , 2019, , .		4
39	On the validity of the use of a localized approximation for helical beams. I. Formal aspects. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 208, 12-18.	2.3	31
40	On the validity of the use of a localized approximation for helical beams. II. Numerical aspects. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 215, 41-50.	2.3	31
41	Circularly symmetric frozen waves: Vector approach for light scattering calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 112-119.	2.3	20
42	On the validity of integral localized approximation for on-axis zeroth-order Mathieu beams. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 27-34.	2.3	42
43	Analytical Descriptions of Finite-Energy Bessel Beams in the Generalized Lorenz-Mie Theory. , 2018, , .		1
44	Microstructured Light Fields for Optical Trapping: Zero Order Continuous Vector Frozen Waves in the Rayleigh Regime. , 2018, , .		2
45	On localized approximations for Laguerre-Gauss beams focused by a lens. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 218, 100-114.	2.3	34
46	Discrete vector frozen waves in generalized Lorenzâ€“Mie theory: linear, azimuthal, and radial polarizations. Applied Optics, 2018, 57, 3293.	1.8	28
47	Assessing the validity of the localized approximation for discrete superpositions of Bessel beams. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 2690.	2.1	32
48	On the validity of localized approximation for an on-axis zeroth-order Bessel beam. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 195, 18-25.	2.3	43
49	On the accuracy of approximate descriptions of discrete superpositions of Bessel beams in the generalized Lorenz-Mie theory. , 2017, , .		1
50	On analytical descriptions of finite-energy paraxial frozen waves in generalized Lorenz-Mie theory. , 2017, , .		4
51	Longitudinal forces on a spherical dielectric particle exerted by a truncated bessel beam in the ray optics regime. , 2017, , .		0
52	Circularly symmetric frozen waves and their optical forces in optical tweezers using a ray optics approach. , 2017, , .		2
53	On the validity of the integral localized approximation for Bessel beams and associated radiation pressure forces. Applied Optics, 2017, 56, 5377.	2.1	35
54	Structuring light under different polarization states within micrometer domains: exact analysis from the Maxwell equations. Optics Express, 2017, 25, 10051.	3.4	27

#	Article	IF	Citations
55	Extracting Metamaterial Properties of Negative-Index and Plasmonic scatterers from the Mie Coefficients. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2016, 15, 146-156.	0.7	2
56	Symmetry relations in the generalized Lorenzâ€"Mie theory for lossless negative refractive index media. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 180, 147-153.	2.3	2
57	Ray Optics Analysis of Optical Trapping and Manipulation of Lossy Double-Negative Spherical Particles. , 2016, , .		0
58	Approximations to the Mie scattering coefficients for plasmonic and negative-index Rayleigh scatterers. , 2015, , .		1
59	Discrete superposition of equal-frequency Bessel beams: Time-average forces exerted on dielectric and magnetodielectric Rayleigh particles. , 2015, , .		0
60	Analytical approach of ordinary frozen waves for optical trapping and micromanipulation. Applied Optics, 2015, 54, 2584.	1.8	40
61	Diffraction-resistant scalar beams generated by a parabolic reflector and a source of spherical waves. Applied Optics, 2015, 54, 5949.	2.1	3
62	Time-average forces over Rayleigh particles by superposition of equal-frequency arbitrary-order Bessel beams. Journal of the Optical Society of America B: Optical Physics, 2015, 32, B67.	2.1	16
63	Optical forces experienced by arbitrary-sized spherical scatterers from superpositions of equal-frequency Bessel beams. Journal of the Optical Society of America B: Optical Physics, 2015, 32, B37.	2.1	44
64	Transverse Optical Forces Exerted on Micro and Nano Particles from Incident Plane Waves. , 2014, , .		0
65	Nanocircuits and Nanoimpedances of Nonmagnetic Plasmonic Nanoparticles From the Mie Theory Point of View. IEEE Nanotechnology Magazine, 2013, 12, 1042-1046.	2.0	6
66	Plasmonic and dielectric nano-cylinders: Lumped nano-capacitors and nano-inductors from plane waves with arbitrary orientation and polarization. , 2013, , .		0
67	RLC Circuit Model for the Scattering of Light by Small Negative Refractive Index Spheres. IEEE Nanotechnology Magazine, 2012, 11, 1217-1222.	2.0	10
68	The Mie theory and its nanocircuits and nanoimpedances for plasmonic nanoparticles. , 2012, , .		0
69	Optical forces in lossless arbitrary refractive index optical trapping and micromanipulation. Metamaterials, 2012, 6, 51-63.	2.2	2
70	RLC ladder networks for relatively and very small negative refractive index scatterers. , 2012, , .		0
71	Emphasizing the metamaterial behavior of the Mie scattering coefficients and Debye series for negative refractive index spherical particles. , 2011, , .		3
72	Overcoming Diffraction in FSO Systems Using (GRIN) Axicons for Approximating the Longitudinal Intensity Profiles. Journal of Lightwave Technology, 2011, 29, 2527-2532.	4.6	3

#	Article	IF	Citations
73	Radiation pressure cross sections and optical forces over negative refractive index spherical particles by ordinary Bessel beams. Applied Optics, 2011, 50, 4489.	2.1	28
74	Integral localized approximation description of ordinary Bessel beams and application to optical trapping forces. Biomedical Optics Express, 2011, 2, 1893.	2.9	60
75	Spin angular momentum transfer from TEM_00 focused Gaussian beams to negative refractive index spherical particles. Biomedical Optics Express, 2011, 2, 2354.	2.9	14
76	Diffraction-Attenuation Resistant Beams. , 2011, , .		1
77	Optical Torque Analysis of Double-Negative Optical Trapping with Focused Gaussian Beams. , 2010, , .		0
78	Double Negative Optical Trapping. , 2010, , .		0
79	Diffractionâ€"attenuation resistant beams: their higher-order versions and finite-aperture generations. Applied Optics, 2010, 49, 5861.	2.1	42
80	Fundamentals of negative refractive index optical trapping: forces and radiation pressures exerted by focused Gaussian beams using the generalized Lorenz-Mie theory. Biomedical Optics Express, 2010, 1, 1284.	2.9	21
81	Inversion of gradient forces for high refractive index particles in optical trapping. Optics Express, 2010, 18, 5802.	3.4	18
82	Gradient forces on double-negative particles in optical tweezers using Bessel beams in the ray optics regime. Optics Express, 2010, 18, 24287.	3.4	34
83	Double Negative Particles in Optical Tweezers. , 2010, , .		0
84	Trapping double negative particles in the ray optics regime using optical tweezers with focused beams. Optics Express, 2009, 17, 21918.	3.4	17
85	Gradient forces on optical tweezers for conventional and metamaterial particles using Bessel Beams. , 2009, , .		1
86	Finite aperture realization of the diffraction-attenuation resistant beams in absorbing media. , 2007, , .		2
87	Manipulating gradient forces on optical tweezers using bessel beams. , 2007, , .		0
88	Axicons in FSO systems. , 2007, , .		0
89	The benefits of heterogeneous beowulf cluster on the human heads SAR simulaiton. , 0, , .		1
90	Comparative numerical analysis between the multipole expansion of optical force up to quadrupole terms and the generalized Lorenz-Mie theory. Journal of the Optical Society of America B: Optical Physics, 0, , .	2.1	1