

Gabriel Molina-Terriza

List of Publications by Year in descending order

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104
papers

4,975
citations

126708

33
h-index

88477

70
g-index

107
all docs

107
docs citations

107
times ranked

3785
citing authors

#	ARTICLE	IF	CITATIONS
1	Twisted photons. Nature Physics, 2007, 3, 305-310.	6.5	1,196
2	Management of the Angular Momentum of Light: Preparation of Photons in Multidimensional Vector States of Angular Momentum. Physical Review Letters, 2001, 88, 013601.	2.9	538
3	Twisting of light around rotating black holes. Nature Physics, 2011, 7, 195-197.	6.5	267
4	Long-Distance Free-Space Distribution of Quantum Entanglement. Science, 2003, 301, 621-623.	6.0	177
5	Triggered Qutrits for Quantum Communication Protocols. Physical Review Letters, 2004, 92, 167903.	2.9	175
6	Observation of the Dynamical Inversion of the Topological Charge of an Optical Vortex. Physical Review Letters, 2001, 87, .	2.9	142
7	Electromagnetic Duality Symmetry and Helicity Conservation for the Macroscopic Maxwell's Equations. Physical Review Letters, 2013, 111, 060401.	2.9	141
8	Preparation of engineered two-photon entangled states for multidimensional quantum information. Physical Review A, 2003, 67, .	1.0	125
9	Propagation and control of noncanonical optical vortices. Optics Letters, 2001, 26, 163.	1.7	113
10	Experimental Quantum Coin Tossing. Physical Review Letters, 2005, 94, 040501.	2.9	113
11	Helicity and angular momentum: A symmetry-based framework for the study of light-matter interactions. Physical Review A, 2012, 86, .	1.0	96
12	Shaping the Waveform of Entangled Photons. Physical Review Letters, 2007, 99, 243601.	2.9	95
13	Controlling the Optical Near Field of Nanoantennas with Spatial Phase-Shaped Beams. Nano Letters, 2009, 9, 3608-3611.	4.5	95
14	Duality symmetry and Kerker conditions. Optics Letters, 2013, 38, 1857.	1.7	94
15	Angular momentum-induced circular dichroism in non-chiral nanostructures. Nature Communications, 2014, 5, 4922.	5.8	83
16	How a Dove prism transforms the orbital angular momentum of a light beam. Optics Express, 2006, 14, 9093.	1.7	77
17	Globally linked vortex clusters in trapped wave fields. Physical Review E, 2002, 66, 036612.	0.8	73
18	The curious arithmetic of optical vortices. Optics Letters, 2000, 25, 1135.	1.7	63

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19	Control of the shape of the spatial mode function of photons generated in noncollinear spontaneous parametric down-conversion. <i>Physical Review A</i> , 2005, 72, .	1.0	51
20	Probing canonical geometrical objects by digital spiral imaging. <i>Journal of the European Optical Society-Rapid Publications</i> , 2007, 2, .	0.9	50
21	Structural Instability of Vortices in Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2001, 87, 140403.	2.9	49
22	Excitation of single multipolar modes with engineered cylindrically symmetric fields. <i>Optics Express</i> , 2012, 20, 24536.	1.7	49
23	Dual and anti-dual modes in dielectric spheres. <i>Optics Express</i> , 2013, 21, 17520.	1.7	47
24	Orbital angular momentum of photons in noncollinear parametric downconversion. <i>Optics Communications</i> , 2003, 228, 155-160.	1.0	44
25	Deterministic Subwavelength Control of Light Confinement in Nanostructures. <i>Physical Review Letters</i> , 2010, 105, 216802.	2.9	44
26	Role of duality symmetry in transformation optics. <i>Physical Review B</i> , 2013, 88, .	1.1	43
27	The role of the angular momentum of light in Mie scattering. Excitation of dielectric spheres with Laguerre-Gaussian modes. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 126, 50-55.	1.1	40
28	Experimental control of optical helicity in nanophotonics. <i>Light: Science and Applications</i> , 2014, 3, e183-e183.	7.7	40
29	Cooperatively enhanced dipole forces from artificial atoms in trapped nanodiamonds. <i>Nature Physics</i> , 2017, 13, 241-245.	6.5	39
30	Correlations in orbital angular momentum of spatially entangled paired photons generated in parametric down-conversion. <i>Physical Review A</i> , 2008, 77, .	1.0	38
31	Kerker Conditions upon Lossless, Absorption, and Optical Gain Regimes. <i>Physical Review Letters</i> , 2020, 125, 073205.	2.9	37
32	Vortex revivals with trapped light. <i>Optics Letters</i> , 2001, 26, 1601.	1.7	36
33	Isotropically Polarized Speckle Patterns. <i>Physical Review Letters</i> , 2015, 114, 113902.	2.9	35
34	Vortex streets in walking parametric wave mixing. <i>Optics Letters</i> , 1999, 24, 899.	1.7	34
35	The spatial shape of entangled photon states generated in non-collinear, walking parametric downconversion. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, 235-239.	1.4	33
36	Soliton algebra by vortex-beam splitting. <i>Optics Letters</i> , 2001, 26, 1004.	1.7	29

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37	Determination of the total angular momentum of a paraxial beam. <i>Physical Review A</i> , 2008, 78, .	1.0	29
38	Tailoring Multipolar Mie Scattering with Helicity and Angular Momentum. <i>ACS Photonics</i> , 2018, 5, 2936-2944.	3.2	29
39	Surface-Enhanced Circular Dichroism Spectroscopy on Periodic Dual Nanostructures. <i>ACS Photonics</i> , 2020, 7, 2978-2986.	3.2	29
40	Vortex evolution in parametric wave mixing. <i>Optics Communications</i> , 1999, 162, 357-366.	1.0	27
41	Quantum optical rotatory dispersion. <i>Science Advances</i> , 2016, 2, e1601306.	4.7	26
42	Measurement and Shaping of Biphoton Spectral Wave Functions. <i>Physical Review Letters</i> , 2015, 115, 193602.	2.9	24
43	Multicharged vortex evolution in seeded second-harmonic generation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2000, 17, 1197.	0.9	23
44	100 MHz Amplitude and Polarization Modulated Optical Source for Free-Space Quantum Key Distribution at 850 nm. <i>Journal of Lightwave Technology</i> , 2010, 28, 2572-2578.	2.7	23
45	Multicolor soliton clusters. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 2682.	0.9	21
46	Characterization of dielectric spheres by spiral imaging. <i>Optics Letters</i> , 2012, 37, 869.	1.7	21
47	Enhanced spin-orbit optical mirages from dual nanospheres. <i>Physical Review A</i> , 2019, 99, .	1.0	21
48	Azimuthal distinguishability of entangled photons generated in spontaneous parametric down-conversion. <i>Optics Express</i> , 2007, 15, 14636.	1.7	20
49	Correcting vortex splitting in higher order vortex beams. <i>Optics Express</i> , 2014, 22, 9920.	1.7	20
50	Necessary symmetry conditions for the rotation of light. <i>Journal of Chemical Physics</i> , 2013, 138, 214311.	1.2	19
51	Symmetry Protection of Photonic Entanglement in the Interaction with a Single Nanoaperture. <i>Physical Review Letters</i> , 2018, 121, 173901.	2.9	18
52	Far-field measurements of vortex beams interacting with nanoholes. <i>Scientific Reports</i> , 2016, 6, 22185.	1.6	17
53	OAM interferometry: the detection of the rotational Doppler shift. <i>Optics Express</i> , 2017, 25, 21159.	1.7	17
54	Polarization change induced by a galvanometric optical scanner. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2010, 27, 1946.	0.8	16

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55	Observation of optical vortex streets in walking second-harmonic generation. <i>Optics Letters</i> , 2002, 27, 625.	1.7	13
56	On the transformations generated by the electromagnetic spin and orbital angular momentum operators. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014, 31, 2136.	0.9	12
57	Measurement and limitations of optical orbital angular momentum through corrected atmospheric turbulence. <i>Optics Express</i> , 2016, 24, 2919.	1.7	12
58	Spin-dependent charge state interconversion of nitrogen vacancy centers in nanodiamonds. <i>Physical Review B</i> , 2019, 99, .	1.1	12
59	The role of angular momentum in the construction of electromagnetic multipolar fields. <i>European Journal of Physics</i> , 2012, 33, 1099-1109.	0.3	11
60	Impact of imbalancing in the self-splitting of beams with nested vortices into solitons in quadratic non-linear crystals. <i>Optics Communications</i> , 1998, 158, 170-180.	1.0	10
61	Role of the absorption on the spin-orbit interactions of light with Si nano-particles. <i>Journal of Applied Physics</i> , 2019, 126, 033104.	1.1	10
62	All-Optical Self-Referenced Transverse Position Sensing with Subnanometer Precision. <i>ACS Photonics</i> , 2018, 5, 3628-3633.	3.2	9
63	Superposition of noncoaxial vortices in parametric wave mixing. <i>Physical Review E</i> , 2002, 66, 036608.	0.8	8
64	Orbital angular momentum correlations of entangled paired photons. <i>Journal of Optics</i> , 2009, 11, 094013.	1.5	8
65	Scattering in multilayered structures: Diffraction from a nanohole. <i>Physical Review A</i> , 2011, 84, .	1.0	7
66	Polarization properties of light scattered off solutions of chiral molecules in non-forward direction. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	7
67	Lens-axicon separation to tailor aberration free focused Bessel-Gaussian beams in the paraxial regime. <i>Optics Express</i> , 2019, 27, 11160.	1.7	7
68	Demonstration of vortex-induced beam shaping in seeded second-harmonic generation. <i>Optics Express</i> , 2001, 9, 110.	1.7	6
69	Quantum Emulation of Gravitational Waves. <i>Scientific Reports</i> , 2015, 5, 11538.	1.6	6
70	Simultaneous frequency conversion and beam shaping for optical-tweezers applications. <i>Journal of Modern Optics</i> , 2003, 50, 1563-1572.	0.6	5
71	Characterization of optical beams with spiral phase interferometry. <i>Optics Express</i> , 2008, 16, 4471.	1.7	5
72	Correlations between helicity and optical losses within general electromagnetic scattering theory. <i>Materials Advances</i> , 2022, 3, 4179-4185.	2.6	5

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73	Reconfigurable dynamic beam shaping in seeded frequency doubling. <i>Optics Letters</i> , 2001, 26, 154.	1.7	4
74	Properties of the spatial Wigner function of entangled photon pairs. <i>Physical Review A</i> , 2009, 80, .	1.0	4
75	Symmetry-protection of multiphoton states of light. <i>New Journal of Physics</i> , 2020, 22, 123010.	1.2	4
76	Deflection of quadratic solitons at edge dislocations. <i>Optics Letters</i> , 2003, 28, 1439.	1.7	3
77	Singular Optics: Optical Vortex Streets. <i>Optics and Photonics News</i> , 2002, 13, 56.	0.4	2
78	Bandwidth control of the biphoton wavefunction exploiting spatio-temporal correlations. <i>Optics Communications</i> , 2022, 504, 127461.	1.0	2
79	Vortex streets in walking parametric wave mixing:â€ferrata. <i>Optics Letters</i> , 2000, 25, 767.	1.7	0
80	<title>Vortex nucleation and evolution in parametric wave mixing</title>. , 2001, , .		0
81	The orbital angular momentum of photons in noncollinear spontaneous parametric downconversion. , 2005, , .		0
82	Twisted photons: new classical and quantum applications. , 2005, 5958, 418.		0
83	The spatial shape of photons in spontaneous parametric downconversion. , 0, , .		0
84	New configurations in parametric down conversion for generating light with orbital angular momentum. , 2006, , .		0
85	Tailoring of the frequency correlations and the bandwidth of paired photons in noncollinear parametric downconversion. , 2006, , .		0
86	Tunable control and use of the spectrum of photons in quantum optics applications. <i>Proceedings of SPIE</i> , 2007, , .	0.8	0
87	The orbital angular momentum spectrum of photons generated via parametric down-conversion. , 2007, , .		0
88	Orbital Angular Momentum Correlations in Spontaneous Parametric Down Conversion. , 2007, , .		0
89	100 MHz Amplitude and Polarization Modulated Optical Source for Free-Space Quantum Communications at 850 nm. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2010, , 297-304.	0.2	0
90	Control of optical resonances in dielectric spheres using Laguerre-Gaussian beams. , 2011, , .		0

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91	Radiation diagrams from a nanohole in the momentum basis. , 2011, , .		0
92	Novel biosensing method based on symmetry breaking. , 2013, , .		0
93	Chiral elements and dual systems: towards the design of an omnidirectional optical active media. Proceedings of SPIE, 2013, , .	0.8	0
94	Symmetries and asymmetries in optical activity. , 2013, , .		0
95	Dielectric particles can behave as dual metamaterials. , 2013, , .		0
96	Symmetries and biology: a new approach to biosensing. , 2014, , .		0
97	Nanophotonics gets twisted. Science, 2016, 352, 774-774.	6.0	0
98	Photonic entanglement processing with a single sub-wavelength structure. , 2017, , .		0
99	Quenching dynamics and photo-physics of nitrogen-vacancy centres in nanodiamonds. , 2017, , .		0
100	Photonic entanglement processing with a single sub-wavelength structure. , 2017, , .		0
101	Optical vortices of parametrically coupled waves. , 2002, , .		0
102	Optical vortices in nonlinear quadratic crystals: Classical and quantum features. , 2003, , .		0
103	Twisted photons for quantum applications. , 2007, , .		0
104	Cooperative effects between color centers in diamond: applications to optical tweezers and optomechanics. , 2017, , .		0