

MBabiker

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

63

papers

2,104

citations

21

h-index

45

g-index

75

ext. papers

2,467

ext. citations

3.5

avg, IF

4.97

L-index

#	Paper	IF	Citations
63	Chirality and helicity of linearly-polarised Laguerre-Gaussian beams of small beam waists. <i>Optics Communications</i> , 2021 , 490, 126907	2	5
62	Structured light 2021 , 37-76		
61	Quadrupole absorption rate and orbital angular momentum transfer for atoms in optical vortices. <i>Physical Review A</i> , 2020 , 102,	2.6	2
60	Atom trapping and dynamics in the interaction of optical vortices with quadrupole-active transitions. <i>Physical Review A</i> , 2020 , 101,	2.6	6
59	Atoms in axially shifted tightly focused counter-propagating beams: the role of the Gouy and curvature phases. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2020 , 37, 2570	1.7	1
58	Interference of axially-shifted Laguerre-Gaussian beams and their interaction with atoms. <i>Journal of Optics (United Kingdom)</i> , 2019 , 21, 104002	1.7	4
57	Atoms in complex twisted light. <i>Journal of Optics (United Kingdom)</i> , 2019 , 21, 013001	1.7	57
56	Normal modes and mode transformation of pure electron vortex beams. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	9
55	Optical orbital angular momentum. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	56
54	Orbital-Angular-Momentum Mode Selection by Rotationally Symmetric Superposition of Chiral States with Application to Electron Vortex Beams. <i>Physical Review Letters</i> , 2017 , 119, 094802	7.4	44
53	Electron vortices: Beams with orbital angular momentum. <i>Reviews of Modern Physics</i> , 2017 , 89,	40.5	115
52	Chiral electron sieves for electron vortex beam generation 2016 , 479-480		
51	Mechanical effects on atoms interacting with highly twisted Laguerre-Gaussian light. <i>Physical Review A</i> , 2016 , 94,	2.6	7
50	The role of Gouy phase on the mechanical effects of Laguerre-Gaussian light interacting with atoms 2016 ,		1
49	Surface and Cavity Nanophotonics 2015 , 205-227		
48	Electron vortex beams subject to static magnetic fields. <i>Physical Review A</i> , 2015 , 91,	2.6	15
47	Graphene-like optical light field and its interaction with two-level atoms. <i>Physical Review A</i> , 2015 , 92,	2.6	4

46	Atom vortex beams. <i>Physical Review A</i> , 2014 , 89,	2.6	33
45	Enhanced quadrupole effects for atoms in optical vortices. <i>Physical Review Letters</i> , 2013 , 110, 083002	7.4	40
44	Quantized orbital angular momentum transfer and magnetic dichroism in the interaction of electron vortices with matter. <i>Physical Review Letters</i> , 2012 , 108, 074802	7.4	84
43	Interaction of electron vortices and optical vortices with matter and processes of orbital angular momentum exchange. <i>Physical Review A</i> , 2012 , 86,	2.6	24
42	Surface plasmon optical vortices and their influence on atoms. <i>Journal of Optics (United Kingdom)</i> , 2011 , 13, 064002	1.7	22
41	Azimuthal Sisyphus effect for atoms in a toroidal all-optical trap. <i>Physical Review A</i> , 2011 , 84,	2.6	12
40	Light-induced torque for the generation of persistent current flow in atomic gas Bose-Einstein condensates. <i>Physical Review A</i> , 2010 , 82,	2.6	21
39	Spatiotemporal polarization gradients in phase-bearing light. <i>Physical Review A</i> , 2010 , 81,	2.6	5
38	Surface plasmons with phase singularities and their effects on matter. <i>Physica Status Solidi - Rapid Research Letters</i> , 2010 , 4, 241-243	2.5	10
37	Optical manipulation at planar dielectric surfaces using evanescent Hermite-Gaussian light. <i>Optics Communications</i> , 2010 , 283, 1022-1025	2	18
36	Surface optical vortices. <i>Physical Review A</i> , 2009 , 79,	2.6	27
35	Twisted optical molasses for all-optical atomic cooling and trapping. <i>Physical Review A</i> , 2008 , 77,	2.6	3
34	Atomic reflection off conductor walls as a tool in cold atom traps. <i>European Physical Journal D</i> , 2008 , 48, 417-421	1.3	5
33	Controllable spontaneous decay at material wedges. <i>Physical Review A</i> , 2006 , 73,	2.6	7
32	Generation of microscale current loops, atom rings, and cubic clusters using twisted optical molasses. <i>Physical Review A</i> , 2006 , 73,	2.6	19
31	Oriental effects of twisted light on twisted nematic liquid crystals. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006 , 39, S523-S528	1.3	2
30	Transient optical angular momentum effects and atom trapping in multiple twisted beams 2006 ,		2
29	Interaction of Laguerre-Gaussian light with liquid crystals 2005 ,		3

28	Transient optical angular momentum effects in light-matter interactions. <i>Physical Review A</i> , 2005 , 72,	2.6	20
27	Quantum shifts for qubits in heterostructures. <i>Physical Review A</i> , 2004 , 69,	2.6	5
26	Orbital angular momentum exchange in the interaction of twisted light with molecules. <i>Physical Review Letters</i> , 2002 , 89, 143601	7.4	176
25	Spontaneous emission and cooperative effects near a thin metallic film. <i>Journal of Modern Optics</i> , 2002 , 49, 269-284	1.1	7
24	Quantum theory of spontaneous emission by real moving atoms. <i>Physical Review Letters</i> , 2002 , 89, 123001	2.6	20
23	Electric and magnetic monopoles in rotating Bose-Einstein condensates. <i>Physical Review A</i> , 2001 , 64,	2.6	6
22	Green-function theory of spontaneous emission and cooperative effects in a superlattice of thin metal layers. <i>Physical Review A</i> , 2001 , 63,	2.6	4
21	Electron scattering and capture rates in quantum wells by emission of hybrid optical phonons. <i>Physical Review B</i> , 2001 , 63,	3.3	10
20	Theory of evanescent mode atomic mirrors with a metallic layer. <i>Physical Review A</i> , 2001 , 63,	2.6	24
19	Polar-optical phonon-limited transport in degenerate GaN-based quantum wells. <i>Physical Review B</i> , 2001 , 63,	3.3	26
18	Atomic motion in hollow submicron circular cylinders. <i>Physical Review A</i> , 2000 , 61,	2.6	18
17	Dielectric cavity QED between photonic crystals: An effective uniaxial medium approach. <i>Physical Review A</i> , 2000 , 62,	2.6	16
16	Piezoelectric Scattering in Large-Bandgap Semiconductors and Low-Dimensional Heterostructures. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 572, 507		
15	The Bloch-Grüneisen mobility of two-dimensional electron gas in AlGaIn/GaN heterostructures. <i>Applied Physics Letters</i> , 1999 , 75, 1565-1567	3.4	10
14	Quantum Capture of Injected Electrons in GaN-Based Laser Heterostructures. <i>Physica Status Solidi A</i> , 1999 , 176, 79-83		6
13	IV The Orbital Angular Momentum of Light. <i>Progress in Optics</i> , 1999 , 39, 291-372	3.4	625
12	Multisubband hot-electron transport in GaN-based quantum wells. <i>Applied Physics Letters</i> , 1998 , 73, 2485-2487	2.1	21
11	Effects of a monolayer on the electron-phonon scattering rates in a quantum well: Dielectric continuum versus hybrid model. <i>Journal of Applied Physics</i> , 1998 , 83, 1499-1506	2.5	17

10	Macroscopic quantization in quantum optics and cavity quantum electrodynamics: Interatomic interactions. <i>Physical Review A</i> , 1997 , 56, 905-911	2.6	21
9	Dipole relaxation in dispersive photonic band-gap structures. <i>Physical Review A</i> , 1997 , 55, 1454-1461	2.6	11
8	Nonequilibrium Electrons under Quantization Conditions. <i>Physica Status Solidi (B): Basic Research</i> , 1997 , 204, 262-264	1.3	
7	Atom dynamics in multiple Laguerre-Gaussian beams. <i>Physical Review A</i> , 1996 , 54, 4259-4270	2.6	69
6	Spin-orbit coupling in free-space Laguerre-Gaussian light beams. <i>Physical Review A</i> , 1996 , 53, R2937-R2938	2.6	33
5	Azimuthal doppler shift in light beams with orbital angular momentum. <i>Optics Communications</i> , 1994 , 112, 141-144	2	91
4	Light-induced torque on moving atoms. <i>Physical Review Letters</i> , 1994 , 73, 1239-1242	7.4	141
3	Theory of radiation forces and momenta for mobile atoms in light fields. <i>Physical Review A</i> , 1993 , 48, 1594-1603	2.6	45
2	Gauge Invariant QED with Arbitrary Mixing of $p \cdot A$ and $q \cdot E$ Interactions. <i>Journal of Modern Optics</i> , 1990 , 37, 685-699	1.1	19
1	A Quantized Screening Theory for the Surface Energy of Solids in the Hydrodynamic Jellium Model. <i>Physica Status Solidi (B): Basic Research</i> , 1989 , 153, 145-151	1.3	