

Ebrahim Karimi

List of Publications by Year in Descending Order

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Version: 2024-04-28

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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.

113
papers

5,610
citations

35
h-index

74
g-index

122
ext. papers

6,960
ext. citations

5.9
avg, IF

5.7
L-index

#	Paper	IF	Citations
113	Theoretical and practical aspects of the design and production of synthetic holograms for transmission electron microscopy. <i>Journal of Applied Physics</i> , 2022 , 131, 031101	2.5	2
112	Quantum Applications of Structured Photons 2021 , 423-455		
111	Majorana bosonic quasiparticles from twisted photons in free space. <i>Physical Review A</i> , 2021 , 103,	2.6	3
110	Experimental Demonstration of an Electrostatic Orbital Angular Momentum Sorter for Electron Beams. <i>Physical Review Letters</i> , 2021 , 126, 094802	7.4	19
109	A sorter for electrons based on magnetic elements. <i>Ultramicroscopy</i> , 2021 , 231, 113287	3.1	
108	Full-mode characterization of correlated photon pairs generated in spontaneous downconversion. <i>Optics Letters</i> , 2021 , 46, 2388-2391	3	3
107	Towards communication in a curved spacetime geometry. <i>Communications Physics</i> , 2021 , 4,	5.4	3
106	Two-photon interference: the Hong-Ou-Mandel effect. <i>Reports on Progress in Physics</i> , 2021 , 84, 012402	14.4	12
105	Quantum cryptography with structured photons 2021 , 139-176		1
104	Achieving Ultimate Noise Tolerance in Quantum Communication. <i>Physical Review Applied</i> , 2021 , 15,	4.3	4
103	Polychromatic electric field knots. <i>Physical Review Research</i> , 2021 , 3,	3.9	3
102	Full-field mode sorter using two optimized phase transformations for high-dimensional quantum cryptography. <i>Journal of Optics (United Kingdom)</i> , 2020 , 22, 024001	1.7	9
101	Entanglement: quantum or classical?. <i>Reports on Progress in Physics</i> , 2020 , 83, 064001	14.4	11
100	Generation of electron vortices using nonexact electric fields. <i>Physical Review Research</i> , 2020 , 2,	3.9	11
99	Investigation of underwater quantum channels in a 30 meter flume tank using structured photons. <i>New Journal of Physics</i> , 2020 , 22, 093074	2.9	13
98	Optical framed knots as information carriers. <i>Nature Communications</i> , 2020 , 11, 5119	17.4	12
97	Dynamical diffraction effects in STEM orbital angular momentum resolved electron energy-loss magnetic chiral dichroism. <i>Physical Review B</i> , 2020 , 102,	3.3	3

96	Design of electrostatic phase elements for sorting the orbital angular momentum of electrons. <i>Ultramicroscopy</i> , 2020 , 208, 112861	3.1	15
95	Geometric phase from Aharonov-Bohm to Pancharatnam-Berry and beyond. <i>Nature Reviews Physics</i> , 2019 , 1, 437-449	23.6	74
94	Multi-twist polarization ribbon topologies in highly-confined optical fields. <i>New Journal of Physics</i> , 2019 , 21, 053020	2.9	25
93	Orbital Angular Momentum and Energy Loss Characterization of Plasmonic Excitations in Metallic Nanostructures in TEM. <i>ACS Photonics</i> , 2019 , 6, 620-627	6.3	14
92	Nonlocal quantum erasure of phase objects. <i>Applied Physics Letters</i> , 2019 , 115, 051102	3.4	1
91	Compressed sensing of twisted photons. <i>Optics Express</i> , 2019 , 27, 17426-17434	3.3	2
90	Experimental realization of wave-packet dynamics in cyclic quantum walks. <i>Optica</i> , 2019 , 6, 174	8.6	7
89	Orbital angular momentum resolved electron magnetic chiral dichroism. <i>Physical Review B</i> , 2019 , 100,	3.3	7
88	Twisted electrons. <i>Contemporary Physics</i> , 2018 , 59, 126-144	3.3	26
87	Reconstructing the topology of optical polarization knots. <i>Nature Physics</i> , 2018 , 14, 1079-1082	16.2	71
86	Round-robin differential-phase-shift quantum key distribution with twisted photons. <i>Physical Review A</i> , 2018 , 98,	2.6	18
85	Twisting neutrons may reveal their internal structure. <i>Nature Physics</i> , 2018 , 14, 1-2	16.2	22
84	Quantum cryptography with structured photons through a vortex fiber. <i>Optics Letters</i> , 2018 , 43, 4108-4111	11	28
83	Holographically Probing Longitudinal Magnetic Fields with Electron Vortex Beams. <i>Microscopy and Microanalysis</i> , 2018 , 24, 938-939	0.5	0
82	High-dimensional quantum cloning and applications to quantum hacking. <i>Science Advances</i> , 2017 , 3, e1601915	11.5	52
81	Controlling the orbital angular momentum of high harmonic vortices. <i>Nature Communications</i> , 2017 , 8, 14970	17.4	77
80	Revealing optical vortices with a small number of photons. <i>Laser and Photonics Reviews</i> , 2017 , 11, 1600163	163	3
79	Measuring the orbital angular momentum spectrum of an electron beam. <i>Nature Communications</i> , 2017 , 8, 15536	17.4	51

78	A Classical View of Quantum Time Crystals. <i>Physics Magazine</i> , 2017 , 10,	1.1	1
77	Observation of nanoscale magnetic fields using twisted electron beams. <i>Nature Communications</i> , 2017 , 8, 689	17.4	34
76	Experimental ladder proof of Hardy's nonlocality for high-dimensional quantum systems. <i>Physical Review A</i> , 2017 , 96,	2.6	6
75	General lossless spatial polarization transformations. <i>Journal of Optics (United Kingdom)</i> , 2017 , 19, 0940037	1.7	10
74	Roadmap on structured light. <i>Journal of Optics (United Kingdom)</i> , 2017 , 19, 013001	1.7	518
73	Phase retrieval of an electron vortex beam using diffraction holography. <i>Applied Physics Letters</i> , 2017 , 111, 223101	3.4	6
72	Generalized optical angular momentum sorter and its application to high-dimensional quantum cryptography. <i>Optics Express</i> , 2017 , 25, 19832-19843	3.3	35
71	Observation of subluminal twisted light in vacuum: reply. <i>Optica</i> , 2017 , 4, 207	8.6	1
70	High-dimensional intracity quantum cryptography with structured photons. <i>Optica</i> , 2017 , 4, 1006	8.6	203
69	Generation with phase-and-amplitude electron holograms of Laguerre-Gauss beams with orbital angular momentum up to 200. 2016 , 709-710		1
68	The measurement of off-plane magnetic field through electron vortex beams 2016 , 685-686		
67	Electron beam lithography for the realization of electron beam vortices with large topological charge ($L=1000$) 2016 , 390-391		
66	Spin-multislice simulation of an electron inside the objective lens of a TEM 2016 , 410-411		
65	Tighter spots of light with superposed orbital-angular-momentum beams. <i>Physical Review A</i> , 2016 , 94,	2.6	15
64	Arbitrary optical wavefront shaping via spin-to-orbit coupling. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 124002	1.7	29
63	Diffraction holography for the phase retrieval of vortex beams 2016 , 713-714		
62	Generation and application of bessel beams in electron microscopy. <i>Ultramicroscopy</i> , 2016 , 166, 48-60	3.1	28
61	Observation of subluminal twisted light in vacuum. <i>Optica</i> , 2016 , 3, 351	8.6	38

60	High-dimensional quantum cloning of orbital angular momentum qudits 2016 ,		2
59	Super-critical phasematching for photon pair generation in structured light modes. <i>Optics Express</i> , 2016 , 24, 24495-24508	3.3	3
58	Quantum probabilities from quantum entanglement: experimentally unpacking the Born rule. <i>New Journal of Physics</i> , 2016 , 18, 053013	2.9	8
57	Polarization Shaping for Control of Nonlinear Propagation. <i>Physical Review Letters</i> , 2016 , 117, 233903	7.4	56
56	Hong-Ou-Mandel interference of entangled Hermite-Gauss modes. <i>Physical Review A</i> , 2016 , 94,	2.6	14
55	Nondestructive Measurement of Orbital Angular Momentum for an Electron Beam. <i>Physical Review Letters</i> , 2016 , 117, 154801	7.4	21
54	Measuring the self-healing of the spatially inhomogeneous states of polarization of vector Bessel beams. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 035617	1.7	56
53	Structured quantum waves. <i>Nature Physics</i> , 2015 , 11, 629-634	16.2	91
52	4 \times 20 Gbit/s mode division multiplexing over free space using vector modes and a q-plate mode (de)multiplexer. <i>Optics Letters</i> , 2015 , 40, 1980-3	3	266
51	Quantum walks and wavepacket dynamics on a lattice with twisted photons. <i>Science Advances</i> , 2015 , 1, e1500087	14.3	109
50	Dynamics of laser-induced radial birefringence in silver-doped glasses. <i>Optics Letters</i> , 2015 , 40, 4062-5	3	
49	Structured Electron Beam Illumination: A New Control Over the Electron Probe Weird Probes and New Experiments. <i>Microscopy and Microanalysis</i> , 2015 , 21, 25-26	0.5	1
48	Real-time imaging of spin-to-orbital angular momentum hybrid remote state preparation. <i>Physical Review A</i> , 2015 , 92,	2.6	30
47	Observation of quantum recoherence of photons by spatial propagation. <i>Scientific Reports</i> , 2015 , 5, 15330	4.9	5
46	Holographic Generation of Highly Twisted Electron Beams. <i>Microscopy and Microanalysis</i> , 2015 , 21, 675-676	0.5	1
45	Electron holograms encoding amplitude and phase for the generation of arbitrary wavefunctions. <i>Microscopy and Microanalysis</i> , 2015 , 21, 503-504	0.5	5
44	Holograms for the Generation of Vortex States with L=500h Fabricated by Electron Beam Lithography. <i>Microscopy and Microanalysis</i> , 2015 , 21, 667-668	0.5	3
43	Spin-Multislice Applied to the Electron Spin Interaction with Materials. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1961-1962	0.5	

42	PHYSICS. Classical entanglement?. <i>Science</i> , 2015 , 350, 1172-3	33.3	65
41	Experimental observation of subluminal light carrying orbital angular momentum in vacuum 2015 ,		1
40	Quantifying the impact of proximity error correction on plasmonic metasurfaces [Invited]. <i>Optical Materials Express</i> , 2015 , 5, 2798	2.6	12
39	Optics. Observation of optical polarization Möbius strips. <i>Science</i> , 2015 , 347, 964-6	33.3	202
38	Holographic generation of highly twisted electron beams. <i>Physical Review Letters</i> , 2015 , 114, 034801	7.4	62
37	Highly efficient electron vortex beams generated by nanofabricated phase holograms. <i>Applied Physics Letters</i> , 2014 , 104, 043109	3.4	97
36	Exploring the quantum nature of the radial degree of freedom of a photon via Hong-Ou-Mandel interference. <i>Physical Review A</i> , 2014 , 89,	2.6	70
35	Generation of a spin-polarized electron beam by multipole magnetic fields. <i>Ultramicroscopy</i> , 2014 , 138, 22-7	3.1	10
34	Generation of Nondiffracting Electron Bessel Beams. <i>Physical Review X</i> , 2014 , 4,	9.1	56
33	Generating optical orbital angular momentum at visible wavelengths using a plasmonic metasurface. <i>Light: Science and Applications</i> , 2014 , 3, e167-e167	16.7	531
32	Experiments and Potentialities for the use of Bessel Beam in Superresolution STEM. <i>Microscopy and Microanalysis</i> , 2014 , 20, 384-385	0.5	
31	Innovative Phase Plates for Beam Shaping. <i>Microscopy and Microanalysis</i> , 2014 , 20, 228-229	0.5	4
30	Limitations to the determination of a Laguerre-Gauss spectrum via projective, phase-flattening measurement. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014 , 31, A20	1.7	62
29	Achromatic orbital angular momentum generator. <i>New Journal of Physics</i> , 2014 , 16, 123006	2.9	24
28	Optical spin-to-orbital angular momentum conversion in ultra-thin metasurfaces with arbitrary topological charges. <i>Applied Physics Letters</i> , 2014 , 105, 101905	3.4	92
27	Hardy's paradox tested in the spin-orbit Hilbert space of single photons. <i>Physical Review A</i> , 2014 , 89,	2.6	19
26	Tuning vector vortex in spatially coherent supercontinuum multicolored optical beam using q-plate 2014 ,		1
25	Test of mutually unbiased bases for six-dimensional photonic quantum systems. <i>Scientific Reports</i> , 2013 , 3, 2726	4.9	27

24	Generation and dynamics of optical beams with polarization singularities. <i>Optics Express</i> , 2013 , 21, 8815-20	3.9	130
23	Reconstructing the Poynting vector skew angle and wavefront of optical vortex beams via two-channel moiré deflectometry. <i>Optics Letters</i> , 2013 , 38, 887-9	3	28
22	Quantum simulation of a spin polarization device in an electron microscope. <i>New Journal of Physics</i> , 2013 , 15, 093026	2.9	20
21	Integrated multi vector vortex beam generator. <i>Optics Express</i> , 2013 , 21, 16130-41	3.3	35
20	Violation of Leggett-type inequalities in the spin-orbit degrees of freedom of a single photon. <i>Physical Review A</i> , 2013 , 88,	2.6	6
19	Tunable supercontinuum light vector vortex beam generator using a q-plate. <i>Optics Letters</i> , 2013 , 38, 5083-6	3	65
18	Supercontinuum light vector beam generation with a tunable liquid crystal q-plate 2013 ,		1
17	Spin-to-orbital angular momentum conversion and spin-polarization filtering in electron beams. <i>Physical Review Letters</i> , 2012 , 108, 044801	7.4	86
16	Radial coherent and intelligent states of paraxial wave equation. <i>Optics Letters</i> , 2012 , 37, 2484-6	3	41
15	Time-division multiplexing of the orbital angular momentum of light. <i>Optics Letters</i> , 2012 , 37, 127-9	3	30
14	Polarization pattern of vector vortex beams generated by q-plates with different topological charges. <i>Applied Optics</i> , 2012 , 51, C1-6	1.7	261
13	Laser-induced radial birefringence and spin-to-orbital optical angular momentum conversion in silver-doped glasses. <i>Applied Physics Letters</i> , 2011 , 99, 011113	3.4	6
12	Spin-to-orbital conversion of the angular momentum of light and its classical and quantum applications. <i>Journal of Optics (United Kingdom)</i> , 2011 , 13, 064001	1.7	309
11	Efficient generation and control of different-order orbital angular momentum states for communication links. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2011 , 28, 61-5	1.8	14
10	Spin-orbit hybrid entanglement of photons and quantum contextuality. <i>Physical Review A</i> , 2010 , 82,	2.6	119
9	Polarization-controlled evolution of light transverse modes and associated Pancharatnam geometric phase in orbital angular momentum. <i>Physical Review A</i> , 2010 , 81,	2.6	48
8	Universal unitary gate for single-photon spin-orbit four-dimensional states. <i>Physical Review A</i> , 2009 , 80,	2.6	16
7	Optimal quantum cloning of orbital angular momentum photon qubits through HongOuMandel coalescence. <i>Nature Photonics</i> , 2009 , 3, 720-723	33.9	158

6	Light propagation in a birefringent plate with topological charge. <i>Optics Letters</i> , 2009 , 34, 1225-7	3	58
5	Quantum information transfer from spin to orbital angular momentum of photons. <i>Physical Review Letters</i> , 2009 , 103, 013601	7-4	253
4	Efficient generation and sorting of orbital angular momentum eigenmodes of light by thermally tuned q-plates. <i>Applied Physics Letters</i> , 2009 , 94, 231124	3-4	160
3	Improved focusing with hypergeometric-gaussian type-II optical modes. <i>Optics Express</i> , 2008 , 16, 21069-75	3-5	27
2	Hypergeometric-Gaussian modes. <i>Optics Letters</i> , 2007 , 32, 3053-5	3	196
1	Quantum process tomography of a high-dimensional quantum communication channel. <i>Quantum - the Open Journal for Quantum Science</i> , 3 , 138		6