

Aleksey P Porfirev

List of Publications by Citations

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147
papers

1,871
citations

24
h-index

36
g-index

189
ext. papers

2,662
ext. citations

2.2
avg, IF

5.82
L-index

#	Paper	IF	Citations
147	Polarization conversion when focusing cylindrically polarized vortex beams. <i>Scientific Reports</i> , 2016 , 6, 6	4.9	181
146	Single-Mode Lasing from Imprinted Halide-Perovskite Microdisks. <i>ACS Nano</i> , 2019 , 13, 4140-4147	16.7	89
145	Astigmatic transforms of an optical vortex for measurement of its topological charge. <i>Applied Optics</i> , 2017 , 56, 4095-4104	0.2	74
144	Direct laser printing of chiral plasmonic nanojets by vortex beams. <i>Optics Express</i> , 2017 , 25, 10214-10223	3.3	71
143	Vortex Hermite-Gaussian laser beams. <i>Optics Letters</i> , 2015 , 40, 701-4	3	48
142	On-Fly Femtosecond-Laser Fabrication of Self-Organized Plasmonic Nanotextures for Chemo- and Biosensing Applications. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 24946-55	9.5	47
141	Asymmetric Laguerre-Gaussian beams. <i>Physical Review A</i> , 2016 , 93,	2.6	41
140	Asymmetric Gaussian optical vortex. <i>Optics Letters</i> , 2017 , 42, 139-142	3	39
139	Half Pearcey laser beams. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 035604	1.7	38
138	Study of propagation of vortex beams in aerosol optical medium. <i>Applied Optics</i> , 2017 , 56, E8-E15	0.2	37
137	Optical trapping and moving of microparticles by using asymmetrical Laguerre-Gaussian beams. <i>Optics Letters</i> , 2016 , 41, 2426-9	3	37
136	Chirality of laser-printed plasmonic nanoneedles tunable by tailoring spiral-shape pulses. <i>Applied Surface Science</i> , 2019 , 470, 526-534	6.7	35
135	A highly efficient element for generating elliptic perfect optical vortices. <i>Applied Physics Letters</i> , 2017 , 110, 261102	3.4	34
134	Multi-beam pulsed-laser patterning of plasmonic films using broadband diffractive optical elements. <i>Optics Letters</i> , 2017 , 42, 2838-2841	3	33
133	Optimal phase element for generating a perfect optical vortex. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2016 , 33, 2376-2384	1.8	32
132	Formation of hybrid higher-order cylindrical vector beams using binary multi-sector phase plates. <i>Scientific Reports</i> , 2018 , 8, 14320	4.9	32
131	Elliptic Gaussian optical vortices. <i>Physical Review A</i> , 2017 , 95,	2.6	31

130	Sudden autofocusing of superlinear chirp beams. <i>Journal of Optics (United Kingdom)</i> , 2018 , 20, 025605	1.7	30
129	Dark-hollow optical beams with a controllable shape for optical trapping in air. <i>Optics Express</i> , 2015 , 23, 8373-82	3.3	27
128	Photonic nanohelix generated by a binary spiral axicon. <i>Applied Optics</i> , 2016 , 55, B44-8	1.7	27
127	Zero-orbital-angular-momentum laser printing of chiral nanoneedles. <i>Optics Letters</i> , 2017 , 42, 5022-5025		27
126	Calculation of fractional orbital angular momentum of superpositions of optical vortices by intensity moments. <i>Optics Express</i> , 2019 , 27, 11236-11251	3.3	27
125	An optical tweezer in asymmetrical vortex Bessel-Gaussian beams. <i>Journal of Applied Physics</i> , 2016 , 120, 023101	2.5	25
124	Recognition of polarization and phase states of light based on the interaction of non-uniformly polarized laser beams with singular phase structures. <i>Optics Express</i> , 2019 , 27, 18484-18492	3.3	24
123	Aberration laser beams with autofocusing properties. <i>Applied Optics</i> , 2018 , 57, 1410-1416	1.7	23
122	Generation of an array of optical bottle beams using a superposition of Bessel beams. <i>Applied Optics</i> , 2013 , 52, 6230-8	1.7	23
121	Properties of vortex light fields generated by generalized spiral phase plates. <i>Physical Review A</i> , 2020 , 101,	2.6	21
120	Astigmatic laser beams with a large orbital angular momentum. <i>Optics Express</i> , 2018 , 26, 141-156	3.3	21
119	Generation of azimuthally modulated circular superlinear Airy beams. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017 , 34, 2544	1.7	20
118	Simultaneous wavelength and orbital angular momentum demultiplexing using tunable MEMS-based Fabry-Perot filter. <i>Optics Express</i> , 2017 , 25, 9634-9646	3.3	19
117	3D transformations of light fields in the focal region implemented by diffractive axicons. <i>Applied Physics B: Lasers and Optics</i> , 2018 , 124, 1	1.9	19
116	High-throughput micropatterning of plasmonic surfaces by multiplexed femtosecond laser pulses for advanced IR-sensing applications. <i>Applied Surface Science</i> , 2019 , 484, 948-956	6.7	18
115	Auto-focusing accelerating hyper-geometric laser beams. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 025610	1.7	16
114	Vector Lissajous laser beams. <i>Optics Letters</i> , 2020 , 45, 4112-4115	3	16
113	Plasmonic Nanolenses Produced by Cylindrical Vector Beam Printing for Sensing Applications. <i>Scientific Reports</i> , 2019 , 9, 19750	4.9	16

112	Diffraction patterns with m th order symmetry generated by sectional spiral phase plates. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 125607	1.7	15
111	Vortex Laser Beams		15
110	Orbital angular momentum of a laser beam behind an off-axis spiral phase plate. <i>Optics Letters</i> , 2019 , 44, 3673-3676	3	15
109	Optical trapping and manipulation of light-absorbing particles by means of a Hermite-Gaussian laser beam. <i>Journal of Optical Technology (A Translation of Opticheskii Zhurnal)</i> , 2015 , 82, 587	0.9	14
108	Simple method for efficient reconfigurable optical vortex beam splitting. <i>Optics Express</i> , 2017 , 25, 18722-18735	3.4	14
107	Local foci of a parabolic binary diffraction lens. <i>Applied Optics</i> , 2015 , 54, 5680-5	0.2	13
106	Optical trapping and moving of microparticles using asymmetrical bessel-gaussian beams. <i>Computer Optics</i> , 2016 , 40, 152-157	1.4	13
105	Wavefront Aberration Sensor Based on a Multichannel Diffractive Optical Element. <i>Sensors</i> , 2020 , 20,	3.8	13
104	Elliptic perfect optical vortices. <i>Optik</i> , 2018 , 156, 49-59	2.5	12
103	Dynamic focal shift and extending depth of focus based on the masking of the illuminating beam and using an adjustable axicon. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2019 , 36, 1039-1047	1.8	12
102	Orbital angular momentum and topological charge of a multi-vortex Gaussian beam. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2020 , 37, 1740-1747	1.8	12
101	10-million-elements-per-second printing of infrared-resonant plasmonic arrays by multiplexed laser pulses. <i>Optics Letters</i> , 2019 , 44, 283-286	3	12
100	Evolution of an optical vortex with an initial fractional topological charge. <i>Physical Review A</i> , 2020 , 102,	2.6	12
99	Mechanism of formation of an inverse energy flow in a sharp focus. <i>Physical Review A</i> , 2020 , 101,	2.6	11
98	Polarization-selective Excitation of Dye Luminescence on a Gold Film by Structured Ultrashort Laser Pulses. <i>JETP Letters</i> , 2018 , 107, 15-18	1.2	11
97	Effect of the fill factor of an annular diffraction grating on the energy distribution in the focal plane. <i>Journal of Optical Technology (A Translation of Opticheskii Zhurnal)</i> , 2017 , 84, 580	0.9	11
96	Vortex astigmatic Fourier-invariant Gaussian beams. <i>Optics Express</i> , 2019 , 27, 657-666	3.3	11
95	Diffractive axicon with tunable fill factor for focal ring splitting 2017 ,		10

94	Three-dimensional laser trapping on the base of binary radial diffractive optical element. <i>Journal of Modern Optics</i> , 2015 , 62, 1183-1186	1.1	10
93	Variable transformation of singular cylindrical vector beams using anisotropic crystals. <i>Scientific Reports</i> , 2020 , 10, 5590	4.9	10
92	Three different types of astigmatic Hermite-Gaussian beams with orbital angular momentum. <i>Journal of Optics (United Kingdom)</i> , 2019 , 21, 115601	1.7	10
91	Singular laser beams nanofocusing with dielectric nanostructures: theoretical investigation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2016 , 33, 2480	1.7	10
90	Refractive twisted microaxicons. <i>Optics Letters</i> , 2020 , 45, 1334-1337	3	10
89	Diffractive optical elements for multiplexing structured laser beams. <i>Quantum Electronics</i> , 2020 , 50, 629-635	1.8	10
88	Direct Imprinting of Laser Field on Halide Perovskite Single Crystal for Advanced Photonic Applications. <i>Laser and Photonics Reviews</i> , 2021 , 15, 2100094	8.3	10
87	Radial dependence of the angular momentum density of a paraxial optical vortex. <i>Physical Review A</i> , 2018 , 97,	2.6	10
86	Experimental investigation of multi-order diffractive optical elements matched with two types of Zernike functions 2016 ,		9
85	Ultrafast laser printing of self-organized bimetallic nanotextures for multi-wavelength biosensing. <i>Scientific Reports</i> , 2018 , 8, 16489	4.9	9
84	Tight focusing of an asymmetric Bessel beam. <i>Optics Communications</i> , 2015 , 357, 45-51	2	8
83	Spin-orbit and orbit-spin conversion in the sharp focus of laser light: Theory and experiment. <i>Physical Review A</i> , 2020 , 102,	2.6	8
82	Metalenses for the generation of vector Lissajous beams with a complex Poynting vector density. <i>Optics Express</i> , 2021 , 29, 18634-18645	3.3	8
81	Polarisation-dependent transformation of vortex beams when focused perpendicular to the crystal axis. <i>Optics Communications</i> , 2018 , 428, 63-68	2	7
80	Shifted nondiffractive Bessel beams. <i>Physical Review A</i> , 2015 , 91,	2.6	7
79	Application of a binary curved fork grating for the generation and detection of optical vortices outside the focal plane. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2020 , 37, 1714	1.7	7
78	Symmetry-wise nanopatterning and plasmonic excitation of ring-like gold nanoholes by structured femtosecond laser pulses with different polarizations. <i>Optics Letters</i> , 2019 , 44, 1129-1132	3	7
77	Control of the intensity distribution along the light spiral generated by a generalized spiral phase plate. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021 , 38, 420	1.7	7

76	Fractional two-parameter parabolic diffraction-free beams. <i>Optics Communications</i> , 2019 , 450, 103-111	2	6
75	Efficient generation of arrays of closed-packed high-quality light rings. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2019 , 37, 100736	2.6	6
74	Zernike basis-matched multi-order diffractive optical elements for wavefront weak aberrations analysis 2017 ,		6
73	Sector sandwich structure: an easy-to-manufacture way towards complex vector beam generation. <i>Optics Express</i> , 2020 , 28, 27628-27643	3.3	6
72	Demonstration of a simple technique for controllable revolution of light-absorbing particles in air. <i>Optics Letters</i> , 2020 , 45, 1475-1478	3	6
71	Silicon microprotrusions with tailored chirality enabled by direct femtosecond laser ablation. <i>Optics Letters</i> , 2020 , 45, 3050-3053	3	6
70	FRACTIONAL ORBITAL ANGULAR MOMENTUM OF A GAUSSIAN BEAM WITH AN EMBEDDED OFF-AXIS OPTICAL VORTEX. <i>Computer Optics</i> , 2017 , 41, 22-29	1.4	6
69	A Spiral Phase Plate for an Optical Vortices Generation 2018 , 1-43		6
68	Topological stability of optical vortices diffracted by a random phase screen. <i>Computer Optics</i> , 2019 , 43, 917-925	1.4	6
67	Generation of Complex Transverse Energy Flow Distributions with Autofocusing Optical Vortex Beams. <i>Micromachines</i> , 2021 , 12,	3.3	6
66	Generation of Multiple Vector Optical Bottle Beams. <i>Photonics</i> , 2021 , 8, 218	2.2	6
65	Optical mill tool for the massive transfer of airborne light-absorbing particles. <i>Applied Physics Letters</i> , 2019 , 115, 201103	3.4	5
64	GENERATION OF HALF-PEARCEY LASER BEAMS BY A SPATIAL LIGHT MODULATOR. <i>Computer Optics</i> , 2014 , 38, 658-662	1.4	5
63	Non-ring perfect optical vortices with p-th order symmetry generated using composite diffractive optical elements. <i>Applied Physics Letters</i> , 2018 , 113, 171105	3.4	5
62	Spiral Caustics of Vortex Beams. <i>Photonics</i> , 2021 , 8, 24	2.2	5
61	Spatiotemporal dynamics of the polarisation state of laser radiation performed by lens-axicon combinations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019 , 383, 2535-2541	2.3	4
60	Astigmatic transformation of optical vortex beams with high-order cylindrical polarization. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019 , 36, 2193	1.7	4
59	STUDY OF FOCUSING INTO CLOSELY SPACED SPOTS VIA ILLUMINATING A DIFFRACTIVE OPTICAL ELEMENT BY A SHORT-PULSE LASER BEAM. <i>Computer Optics</i> , 2015 , 39, 187-196	1.4	4

58	The superposition of the Bessel and mirrored Bessel beams and investigation of their self-healing characteristic. <i>Optik</i> , 2020 , 208, 164057	2.5	4
57	Generation of multi-contour plane curves using vortex beams. <i>Optik</i> , 2021 , 229, 166299	2.5	4
56	Writing and reading with the longitudinal component of light using carbazole-containing azopolymer thin films.. <i>Scientific Reports</i> , 2022 , 12, 3477	4.9	4
55	Modification of the Gerchberg-Saxton algorithm for the generation of speckle-reduced intensity distributions of micrometer and submicrometer dimensions. <i>Optik</i> , 2019 , 195, 163163	2.5	3
54	A SIMPLE METHOD OF THE FORMATION NONDIFFRACTING HOLLOW OPTICAL BEAMS WITH INTENSITY DISTRIBUTION IN FORM OF A REGULAR POLYGON CONTOUR. <i>Computer Optics</i> , 2014 , 38, 243-248	1.4	3
53	MANIPULATION OF MICRO-OBJECTS USING LINEAR TRAPS GENERATED BY VORTEX AXICONS. <i>Computer Optics</i> , 2014 , 38, 717-721	1.4	3
52	ANALYSIS OF THE ORBITAL ANGULAR MOMENTUM OF SUPERPOSITION OF DIFFRACTION-FREE BESSEL BEAMS WITH A COMPLEX SHIFT. <i>Computer Optics</i> , 2015 , 39, 172-180	1.4	3
51	An imaging spectrometer based on a discrete interference filter. <i>Computer Optics</i> , 2015 , 39, 716-720	1.4	3
50	Transfer of orbital angular momentum from asymmetric laguerre-gaussian beams to dielectric microparticles. <i>Computer Optics</i> , 2016 , 40, 305-311	1.4	3
49	Transfer of spin angular momentum to a dielectric particle. <i>Computer Optics</i> , 2020 , 44, 333-342	1.4	3
48	Harnessing of inhomogeneously polarized Hermite-Gaussian vector beams to manage the 3D spin angular momentum density distribution. <i>Nanophotonics</i> , 2021 ,	6.3	3
47	ORBITAL ANGULAR MOMENTUM OF AN ASTIGMATIC HERMITE-GAUSSIAN BEAM. <i>Computer Optics</i> , 2018 , 42, 13-21	1.4	3
46	Nanocrystalline silicon thin films and grating structures for solar cells 2016 ,		3
45	Realisation of active pulling/pushing laser beams for light-absorbing particles in the air with a pair of diffractive optical elements. <i>Optics and Laser Technology</i> , 2021 , 133, 106584	4.2	3
44	Demonstration of vortical beams spectral stability formed in non-zero diffraction orders. <i>Journal of Physics: Conference Series</i> , 2016 , 735, 012023	0.3	2
43	Symmetric nanostructuring and plasmonic excitation of gold nanostructures by femtosecond Laguerre-Gaussian laser beams. <i>Quantum Electronics</i> , 2019 , 49, 666-671	1.8	2
42	Generation of hollow optical beams for optical manipulation 2014 ,		2
41	Spatial-light-modulator-assisted laser manipulation in air. <i>Optical Engineering</i> , 2020 , 59, 1	1.1	2

40	Sharp focusing of linearly polarized asymmetric Bessel beam. <i>Computer Optics</i> , 2015 , 39, 36-44	1.4	2
39	Generating a perfect optical vortex: comparison of approaches. <i>Computer Optics</i> , 2016 , 40, 312-321	1.4	2
38	Orbital angular momentum of an elliptic optical vortex embedded into the Gaussian beam. <i>Computer Optics</i> , 2017 , 41, 330-337	1.4	2
37	Methods for determining the orbital angular momentum of a laser beam. <i>Computer Optics</i> , 2019 , 43, 42-53	1.4	2
36	HERMITE-GAUSSIAN LASER BEAMS WITH ORBITAL ANGULAR MOMENTUM. <i>Computer Optics</i> , 2014 , 38, 651-657	1.4	2
35	Phase singularities and optical vortices in photonics. <i>Physics-Uspexhi</i> ,	2.8	2
34	Optical and Structural Phenomena at Multipulse Interference Femtosecond Laser Fabrication of Metasurfaces on a Thin Film of Amorphous Silicon. <i>JETP Letters</i> , 2019 , 110, 755-759	1.2	2
33	Laser manipulation of airborne microparticles behind non-transparent obstacles with the help of circular Airy beams. <i>Applied Optics</i> , 2021 , 60, 670-675	1.7	2
32	Comparison of propagation of vortex and non-vortex laser beams in a random medium 2017 ,		1
31	Plasmon excitation of gold split-ring array: spectral studies and numerical simulation. <i>Laser Physics Letters</i> , 2019 , 16, 066007	1.5	1
30	Effect of laser radiation power on laser trapping of light-absorbing microparticles in air. <i>Procedia Engineering</i> , 2017 , 201, 48-52		1
29	Various superpositions of Bessel beams for capture and controlled rotation of microobjects 2014 ,		1
28	Femtosecond laser ablation of thin silver films in air and water under tight focusing. <i>Optical Materials Express</i> , 2020 , 10, 2717	2.6	1
27	Fabrication of phase diffractive optical elements by direct laser writing process in aluminum thin films 2018 ,		1
26	Measurement of the orbital angular momentum of an astigmatic Hermite-Gaussian beam. <i>Computer Optics</i> , 2019 , 43, 356-367	1.4	1
25	Experimental investigation of the energy backflow in the tight focal spot. <i>Computer Optics</i> , 2020 , 44, 863-870	1.4	1
24	Spiral phase plate with multiple singularity centers. <i>Computer Optics</i> , 2020 , 44, 901-908	1.4	1
23	Two-step maskless fabrication of compound fork-shaped gratings in nanomultilayer structures based on chalcogenide glasses. <i>Optics Letters</i> , 2021 , 46, 3037-3040	3	1

22	Formation of Inverse Energy Flux in the Case of Diffraction of Linearly Polarized Radiation by Conventional and Generalized Spiral Phase Plates. <i>Photonics</i> , 2021 , 8, 283	2.2	1
21	Measuring the orbital angular momentum of light beams by using a single intensity distribution. <i>Journal of Physics: Conference Series</i> , 2019 , 1400, 066025	0.3	1
20	Stability of topological properties of optical vortices after diffraction on a phase screen. <i>Optics Communications</i> , 2021 , 479, 126471	2	1
19	Tuning chirality of laser-printed plasmonic nanoneedles via tailored spiral-shape pulses. <i>Journal of Physics: Conference Series</i> , 2018 , 1092, 012147	0.3	1
18	Hybrid design of diffractive optical elements for optical beam shaping. <i>Optics Express</i> , 2021 , 29, 31875-31890	3.9	1
17	Tailoring of Inverse Energy Flow Profiles with Vector Lissajous Beams. <i>Photonics</i> , 2022 , 9, 121	2.2	1
16	Adaptive Detection of Wave Aberrations Based on the Multichannel Filter. <i>Photonics</i> , 2022 , 9, 204	2.2	1
15	Birth of optical vortices in propagating fields with an original fractional topological charge. <i>Computer Optics</i> , 2020 , 44, 493-500	1.4	0
14	Orbital Energy and Spin Flows in a Strong Focus of Laser Light. <i>IEEE Photonics Journal</i> , 2020 , 12, 1-13	1.8	0
13	Phase quantization of diffractive optical elements for the formation of predetermined symmetric light distributions. <i>Journal of Physics: Conference Series</i> , 2016 , 735, 012027	0.3	0
12	Development of subwavelength diffractive optical elements manufacturing process for photonic devices. <i>Journal of Physics: Conference Series</i> , 2019 , 1410, 012247	0.3	0
11	Binary diffractive optics for 3D-demultiplexing of OAM beams. <i>Journal of Physics: Conference Series</i> , 2018 , 1124, 051015	0.3	0
10	Subwavelength gratings for creation and focusing of cylindrical vector beams. <i>Journal of Physics: Conference Series</i> , 2020 , 1461, 012026	0.3	
9	Formation of optical beams with given intensity distribution in transverse plane for deposition and positioning of microscopic objects. <i>Optical Memory and Neural Networks (Information Optics)</i> , 2014 , 23, 233-239	0.7	
8	Structural and Polarization Transformations of Laser Beams in Anisotropic Crystals. <i>Optoelectronics, Instrumentation and Data Processing</i> , 2020 , 56, 170-175	0.6	
7	Laser Printing of Chiral Silicon Nanoprotrusions by Asymmetric Donut-Shaped Femtosecond Pulses. <i>Solid State Phenomena</i> , 312 , 107-112	0.4	
6	Coaxial Aperture Arrays Produced by Ultrafast Direct Femtosecond Laser Processing with Spatially Multiplexed Cylindrical Vector Beams. <i>Solid State Phenomena</i> , 312 , 148-153	0.4	
5	Optical Beams: Polarization Conversion of Focused Vortex Beams 2020 , 341-382		

- 4 Axicons for power conversion efficiency enhancement in solar cells for the visible spectrum.
Journal of Physics: Conference Series, **2016**, 741, 012102 0.3
- 3 Measurement of the fractional orbital angular momentum of asymmetric laser beams by using two cylindrical lenses. *Journal of Physics: Conference Series*, **2019**, 1368, 022019 0.3
- 2 Orbital angular momentum of Gaussian optical vortices with displaced point of phase singularity.
Journal of Physics: Conference Series, **2018**, 1096, 012119 0.3
- 1 Development of diffractive optical elements with low surface roughness by direct laser writing.
Journal of Physics: Conference Series, **2018**, 1124, 051041 0.3