Michael Kovalev

List of Publications by Year
in descending order

59 papers	292 citations	933447 10 h-index	1058476 14 g-index
59 all docs	59 docs citations	59 times ranked	100 citing authors

#	Article	IF	Citations
1	Measurement of wavefront curvature using computer-generated holograms. Optics Express, 2019, 27, 1563.	3.4	23
2	Broadband and fine-structured luminescence in diamond facilitated by femtosecond laser driven electron impact and injection of â€œvacancy-interstitialâ€•pairs. Optics Letters, 2021, 46, 1438.	3.3	16
3	Generating Bessel-Gaussian Beams with Controlled Axial Intensity Distribution. Applied Sciences (Switzerland), 2020, 10, 7911.	2.5	14
4	Hardware/Software Support for Correlation Detection in Holographic Wavefront Sensors. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2019, 127, 618-624.	0.6	13
5	Signatures of ultrafast electronic and atomistic dynamics in bulk photoluminescence of CVD and natural diamonds excited by ultrashort laser pulses of variable pulsewidth. Applied Surface Science, 2022, 575, 151736.	6.1	13
6	Pulse-width-dependent critical power for self-focusing of ultrashort laser pulses in bulk dielectrics. Optics Letters, 2022, 47, 3487.	3.3	13
7	Lensless Scheme for Measuring Laser Aberrations Based on Computer-Generated Holograms. Sensors, 2020, 20, 4310.	3.8	12
8	Energy deposition parameters revealed in the transition from 3D to 1D femtosecond laser ablation of fluorite at high-NA focusing. Optical Materials Express, 2020, 10, 3291.	3.0	12
9	Cumulative defocusing of sub-MHz-rate femtosecond-laser pulses in bulk diamond envisioned by transient A-band photoluminescence. Optical Materials Express, 2021, 11, 2234.	3.0	11
10	Spectrally-selective mid-IR laser-induced inactivation of pathogenic bacteria. Biomedical Optics Express, 2021, 12, 6317.	2.9	11
11	Femtosecond-laser-excited luminescence of the A-band in natural diamond and its thermal control. Optical Materials Express, 2021, 11, 2505.	3.0	10
12	Transformations of the Spectrum of an Optical Phonon Excited in Raman Scattering in the Bulk of Diamond by Ultrashort Laser Pulses with a Variable Duration. JETP Letters, 2022, 115, 251-255.	1.4	10
13	Investigation of Computer-Generated Fresnel Holograms for Wavefront Sensors. Optoelectronics, Instrumentation and Data Processing, 2018, 54, 26-31.	0.6	9
14	Topological transition from deeply sub- to near-wavelength ripples during multi-shot mid-IR femtosecond laser exposure of a silicon surface. Optical Materials Express, 2021, 11, 1.	3.0	9
15	Investigation of the Properties of a Beam Reconstructed from Volume Holographic Optical Elements Used in Optical Observation Devices. Russian Physics Journal, 2016, 58, 1457-1466.	0.4	8
16	Nanopatterned silicon exhibiting partial polarization and chirality. Optical Materials Express, 2021, 11, 1971.	3.0	8
17	Features of the plasma-chemical etching of quartz glass during the formation of deep surface relief on high-precision components of devices. Journal of Optical Technology (A Translation of Opticheskii) Tj ETQq1 1 0.784314 rgBT /Ove	0.4	8
18	Wave front sensor based on holographic optical elements. Journal of Physics: Conference Series, 2016, 737, 012064.	0.4	6

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19	Discrete Representation of Holograms of Halftone Objects. Optical Memory and Neural Networks (Information Optics), 2018, 27, 32-39.	1.0	6
20	Phase Imbalance Optimization in Interference Linear Displacement Sensor with Surface Gratings. Sensors, 2020, 20, 1453.	3.8	6
21	Near-far IR photoconductivity damping in hyperdoped Si at low temperatures. Optical Materials Express, 2021, 11, 3792.	3.0	6
22	Reconstructing the Spatial Parameters of a Laser Beam Using the Transport-of-Intensity Equation. Sensors, 2022, 22, 1765.	3.8	6
23	Modeling of Phase Shifts of Light in Orders of Diffraction Gratings of an Interference Linear Displacement Sensor. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2019, 127, 527-534.	0.6	5
24	Femtosecond laser ablation of thin silver films in air and water under tight focusing. Optical Materials Express, 2020, 10, 2717.	3.0	5
25	3D Microstructuring of Silicate Glass by Femtosecond Laser Radiation. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 928-931.	0.6	4
26	Femtosecond Infrared Laser Spectroscopy of Characteristic Molecular Vibrations in Bacteria in the 6-Âµm Spectral Range. JETP Letters, 2021, 113, 365-369.	1.4	4
27	Computational Method for Wavefront Sensing Based on Transport-of-Intensity Equation. Photonics, 2021, 8, 177.	2.0	4
28	Printed Graysale Security Elements for Product Labeling. Photonics Russia, 2017, , 74-78.	0.1	4
29	Fourier holography in holographic optical sensors. , 2016, , .		3
30	Advanced holographic wavefront sensor. , 2017, , .		3
31	On the Possibilities of Encoding Digital Images Using Fractional Fourier Transform. Optical Memory and Neural Networks (Information Optics), 2019, 28, 252-261.	1.0	3
32	Optical position encoder based on structured head diffraction grating. , 2018, , .		3
33	Determination of the Point Spread Function of a Computer-Generated Lens Formed by a Phase Light Modulator. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1036-1040.	0.6	3
34	Recent progress in holographic wavefront sensing. , 2016, , .		2
35	Ultrashort-laser electronâ€“hole plasma and intragap states in diamond. European Physical Journal D, 2021, 75, 1.	1.3	2
36	Method of accounting errors in the production of computer-generated Fourier holograms during their synthesis. , 2018, , .		2

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37	Mass production of computer-generated Fourier holograms and its application to prevent counterfeiting. , 2018, , .		2
38	Influence of the skin effect on the structure of reliefâ€“phase optical elements obtained by plasmaâ€“chemical etching. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2019, 86, 596.	0.4	2
39	Ablation of (111) and (001) Crystal Plates by Ultrashort Laser Pulses with Rotated Linear Polarization. JETP Letters, 2021, 114, 117-123.	1.4	2
40	The optical refractometry using transport-of-intensity equation. Laser Physics Letters, 2022, 19, 076201.	1.4	2
41	Calculation and analysis of the laser beam field distribution formed by a real optical system. Journal of Physics: Conference Series, 2018, 1096, 012120.	0.4	1
42	Hologram filters in adaptive optics problems. , 2018, , .		1
43	The usability of discrete representation of holograms. Journal of Physics: Conference Series, 2018, 1096, 012113.	0.4	1
44	Holographic method for precise measurement of wavefront aberrations. , 2021, , .		1
45	Transparent computer generated Fourier holograms for optical display and sighting system. , 2018, , .		1
46	INVESTIGATION OF SYNTHESIZED FRENEL HOLOGRAM FOR WAVEFRONT SENSORS. Avtometriya, 2018, , .	0.0	1
47	Measurement of wavefront curvature using computer-generated Fourier holograms. , 2019, , .		1
48	Formfactor of a hologram on a chalcogenide glassy semiconductor and azopolymer. Optical Materials Express, 2020, 10, 1819.	3.0	1
49	Optical wavefields measurement by digital holography methods. Journal of Physics: Conference Series, 2018, 1096, 012112.	0.4	0
50	Ultrafast electron dynamics and energy deposition during IR-visible femtosecond laser ablation of fluorite. Journal of Physics: Conference Series, 2020, 1692, 012009.	0.4	0
51	A combination of computer generated Fresnel holograms and light guide substrate with diffractive optical elements for optical display and sighting system. , 2018, , .		0
52	Investigation of structured head diffraction gratings for linear optical encoder. , 2018, , .		0
53	Development of the methods of holographic optics for wavefront control in photonic systems. , 2018, , .		0
54	Special structuring of diffraction gratings for optical position encoder. , 2019, , .		0

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55	Spatial Photoresponse, Formfactor, and Requirements to Holographic Materials. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 885-896.	0.6	0
56	Echelette based method of CGH synthesis and its application for aberrations measurement. , 2020, , .		0
57	Lensless scheme of a holographic wavefront sensor. , 2020, , .		0
58	Detection and study of polarized pulsed photoluminescence of diamonds for mapping of natural diamond. Journal of Physics: Conference Series, 2021, 2127, 012050.	0.4	0
59	Three-dimensional mapping of the optical centers in the bulk of natural diamond by photoluminescent spectroscopy. Journal of Physics: Conference Series, 2021, 2127, 012049.	0.4	0