

Michael Kovalev

List of Publications by Year in descending order

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59
papers

292
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1058476

14
g-index

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times ranked

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| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | 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 |
| 2 | Reconstructing the Spatial Parameters of a Laser Beam Using the Transport-of-Intensity Equation. Sensors, 2022, 22, 1765. | 3.8 | 6 |
| 3 | 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 |
| 4 | The optical refractometry using transport-of-intensity equation. Laser Physics Letters, 2022, 19, 076201. | 1.4 | 2 |
| 5 | Pulse-width-dependent critical power for self-focusing of ultrashort laser pulses in bulk dielectrics. Optics Letters, 2022, 47, 3487. | 3.3 | 13 |
| 6 | Femtosecond Infrared Laser Spectroscopy of Characteristic Molecular Vibrations in Bacteria in the 6- μm Spectral Range. JETP Letters, 2021, 113, 365-369. | 1.4 | 4 |
| 7 | Broadband and fine-structured luminescence in diamond facilitated by femtosecond laser driven electron impact and injection of e^- -vacancy-interstitial pairs. Optics Letters, 2021, 46, 1438. | 3.3 | 16 |
| 8 | Holographic method for precise measurement of wavefront aberrations. , 2021, , . | | 1 |
| 9 | Computational Method for Wavefront Sensing Based on Transport-of-Intensity Equation. Photonics, 2021, 8, 177. | 2.0 | 4 |
| 10 | Nanopatterned silicon exhibiting partial polarization and chirality. Optical Materials Express, 2021, 11, 1971. | 3.0 | 8 |
| 11 | 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 |
| 12 | Femtosecond-laser-excited luminescence of the A-band in natural diamond and its thermal control. Optical Materials Express, 2021, 11, 2505. | 3.0 | 10 |
| 13 | Ultrashort-laser electron-hole plasma and intragap states in diamond. European Physical Journal D, 2021, 75, 1. | 1.3 | 2 |
| 14 | Spectrally-selective mid-IR laser-induced inactivation of pathogenic bacteria. Biomedical Optics Express, 2021, 12, 6317. | 2.9 | 11 |
| 15 | 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 |
| 16 | Ablation of (111) and (001) Crystal Plates by Ultrashort Laser Pulses with Rotated Linear Polarization. JETP Letters, 2021, 114, 117-123. | 1.4 | 2 |
| 17 | Near-far IR photoconductivity damping in hyperdoped Si at low temperatures. Optical Materials Express, 2021, 11, 3792. | 3.0 | 6 |
| 18 | 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 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Three-dimensional mapping of the optical centers in the bulk of natural diamond by photoluminescent spectroscopy. <i>Journal of Physics: Conference Series</i> , 2021, 2127, 012049. | 0.4 | 0 |
| 20 | Generating Bessel-Gaussian Beams with Controlled Axial Intensity Distribution. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7911. | 2.5 | 14 |
| 21 | Lensless Scheme for Measuring Laser Aberrations Based on Computer-Generated Holograms. <i>Sensors</i> , 2020, 20, 4310. | 3.8 | 12 |
| 22 | 3D Microstructuring of Silicate Glass by Femtosecond Laser Radiation. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2020, 128, 928-931. | 0.6 | 4 |
| 23 | Ultrafast electron dynamics and energy deposition during IR-visible femtosecond laser ablation of fluorite. <i>Journal of Physics: Conference Series</i> , 2020, 1692, 012009. | 0.4 | 0 |
| 24 | Phase Imbalance Optimization in Interference Linear Displacement Sensor with Surface Gratings. <i>Sensors</i> , 2020, 20, 1453. | 3.8 | 6 |
| 25 | Determination of the Point Spread Function of a Computer-Generated Lens Formed by a Phase Light Modulator. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2020, 128, 1036-1040. | 0.6 | 3 |
| 26 | Energy deposition parameters revealed in the transition from 3D to 1D femtosecond laser ablation of fluorite at high-NA focusing. <i>Optical Materials Express</i> , 2020, 10, 3291. | 3.0 | 12 |
| 27 | Formfactor of a hologram on a chalcogenide glassy semiconductor and azopolymer. <i>Optical Materials Express</i> , 2020, 10, 1819. | 3.0 | 1 |
| 28 | Spatial Photoresponse, Formfactor, and Requirements to Holographic Materials. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2020, 128, 885-896. | 0.6 | 0 |
| 29 | Femtosecond laser ablation of thin silver films in air and water under tight focusing. <i>Optical Materials Express</i> , 2020, 10, 2717. | 3.0 | 5 |
| 30 | Echelette based method of CGH synthesis and its application for aberrations measurement. , 2020, , . | | 0 |
| 31 | Lensless scheme of a holographic wavefront sensor. , 2020, , . | | 0 |
| 32 | Modeling of Phase Shifts of Light in Orders of Diffraction Gratings of an Interference Linear Displacement Sensor. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2019, 127, 527-534. | 0.6 | 5 |
| 33 | On the Possibilities of Encoding Digital Images Using Fractional Fourier Transform. <i>Optical Memory and Neural Networks (Information Optics)</i> , 2019, 28, 252-261. | 1.0 | 3 |
| 34 | Hardware/Software Support for Correlation Detection in Holographic Wavefront Sensors. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2019, 127, 618-624. | 0.6 | 13 |
| 35 | Features of the plasma-chemical etching of quartz glass during the formation of deep surface relief on high-precision components of devices. <i>Journal of Optical Technology (A Translation of Opticheskii Zhurnal)</i> , 2019, 86, 596. | 0.4 | 2 |

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|----|--|-----|-----------|
| 37 | Measurement of wavefront curvature using computer-generated holograms. Optics Express, 2019, 27, 1563. | 3.4 | 23 |
| 38 | Special structuring of diffraction gratings for optical position encoder. , 2019, , . | | 0 |
| 39 | Measurement of wavefront curvature using computer-generated Fourier holograms. , 2019, , . | | 1 |
| 40 | 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 |
| 41 | Hologram filters in adaptive optics problems. , 2018, , . | | 1 |
| 42 | The usability of discrete representation of holograms. Journal of Physics: Conference Series, 2018, 1096, 012113. | 0.4 | 1 |
| 43 | Optical wavefields measurement by digital holography methods. Journal of Physics: Conference Series, 2018, 1096, 012112. | 0.4 | 0 |
| 44 | Discrete Representation of Holograms of Halftone Objects. Optical Memory and Neural Networks (Information Optics), 2018, 27, 32-39. | 1.0 | 6 |
| 45 | Investigation of Computer-Generated Fresnel Holograms for Wavefront Sensors. Optoelectronics, Instrumentation and Data Processing, 2018, 54, 26-31. | 0.6 | 9 |
| 46 | Optical position encoder based on structured head diffraction grating. , 2018, , . | | 3 |
| 47 | Method of accounting errors in the production of computer-generated Fourier holograms during their synthesis. , 2018, , . | | 2 |
| 48 | Transparent computer generated Fourier holograms for optical display and sighting system. , 2018, , . | | 1 |
| 49 | Mass production of computer-generated Fourier holograms and its application to prevent counterfeiting. , 2018, , . | | 2 |
| 50 | INVESTIGATION OF SYNTHESIZED FRENEL HOLOGRAM FOR WAVEFRONT SENSORS. Avtometriya, 2018, , . | 0.0 | 1 |
| 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 | Advanced holographic wavefront sensor. , 2017, , . | | 3 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | Printed Grayscale Security Elements for Product Labeling. Photonics Russia, 2017, , 74-78. | 0.1 | 4 |
| 56 | Wave front sensor based on holographic optical elements. Journal of Physics: Conference Series, 2016, 737, 012064. | 0.4 | 6 |
| 57 | Fourier holography in holographic optical sensors. , 2016, , . | | 3 |
| 58 | Recent progress in holographic wavefront sensing. , 2016, , . | | 2 |
| 59 | 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 |