Olga G Kosareva

List of Publications by Year
in descending order

152	5,407	109321 35	85541 71
papers	citations	h-index	g-index

152	152	152	1744
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The propagation of powerful femtosecond laser pulses in opticalmedia: physics, applications, and new challenges. Canadian Journal of Physics, 2005, 83, 863-905.	1.1	551
2	Moving focus in the propagation of ultrashort laser pulses in air. Optics Letters, 1997, 22, 304.	3.3	370
3	Self-transformation of a powerful femtosecond laser pulse into a white-light laser pulse in bulk optical media (or supercontinuum generation). Applied Physics B: Lasers and Optics, 2003, 77, 149-165.	2.2	302
4	Filamentation of high-power femtosecond laser radiation. Quantum Electronics, 2009, 39, 205-228.	1.0	260
5	Advances in intense femtosecond laser filamentation in air. Laser Physics, 2012, 22, 1-53.	1.2	240
6	Conical emission from laserâ€“plasma interactions in the filamentation of powerful ultrashort laser pulses in air. Optics Letters, 1997, 22, 1332.	3.3	231
7	Ultrabroad Terahertz Spectrum Generation from an Air-Based Filament Plasma. Physical Review Letters, 2016, 116, 063902.	7.8	202
8	Femtosecond laser pulse filamentation versus optical breakdown in H 2 O. Applied Physics B: Lasers and Optics, 2003, 76, 215-229.	2.2	168
9	Competition of multiple filaments during the propagation of intense femtosecond laser pulses. Physical Review A, 2004, 70, .	2.5	134
10	FILAMENTATION AND SUPERCONTINUUM GENERATION DURING THE PROPAGATION OF POWERFUL ULTRASHORT LASER PULSES IN OPTICAL MEDIA (WHITE LIGHT LASER). Journal of Nonlinear Optical Physics and Materials, 1999, 08, 121-146.	1.8	130
11	Filamentation â€œremoteâ€•sensing of chemical and biological agents/pollutants using only one femtosecond laser source. Applied Physics B: Lasers and Optics, 2009, 95, 1-12.	2.2	127
12	Filamentation of femtosecond laser pulses in turbulent air. Applied Physics B: Lasers and Optics, 2002, 74, 67-76.	2.2	108
13	Supercontinuum sources in a high-power femtosecond laserpulse propagating in liquids and gases. Quantum Electronics, 2004, 34, 348-354.	1.0	94
14	Multiple refocusing of a femtosecond laser pulse in a dispersive liquid (methanol). Optics Communications, 2003, 225, 193-209.	2.1	91
15	Transformation of terahertz spectra emitted from dual-frequency femtosecond pulse interaction in gases. Optics Letters, 2013, 38, 1906.	3.3	84
16	Interference of transverse rings in multifilamentation of powerful femtosecond laser pulses in air. Optics Communications, 2002, 210, 329-341.	2.1	81
17	Towards a control of multiple filamentation by spatial regularization of a high-power femtosecond laser pulse. Applied Physics B: Lasers and Optics, 2005, 80, 267-275.	2.2	80
18	Role of phase matching in pulsed second-harmonic generation: Walk-off and phase-locked twin pulses in negative-index media. Physical Review A, 2007, 76, .	2.5	76

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19	Nonlinear-optical transformation of a high-power femtosecond laser pulse in air. Quantum Electronics, 2003, 33, 69-75.	1.0	71
20	Arrest of self-focusing collapse in femtosecond air filaments: higher order Kerr or plasma defocusing?. Optics Letters, 2011, 36, 1035.	3.3	67
21	Effect of beam diameter on the propagation of intense femtosecond laser pulses. Applied Physics B: Lasers and Optics, 2005, 80, 35-38.	2.2	66
22	Initial phase modulation of a high-power femtosecond laser pulse as a tool for controlling its filamentation and generation of a supercontinuum in air. Quantum Electronics, 2003, 33, 525-530.	1.0	63
23	Can we reach very high intensity in air with femtosecond PW laser pulses?. Laser Physics, 2009, 19, 1776-1792.	1.2	60
24	Nucleation and random movement of filaments in the propagation of high-power laser radiation in a turbulent atmosphere. Quantum Electronics, 1999, 29, 911-915.	1.0	58
25	Characterization of terahertz emission from a dc-biased filament in air. Applied Physics Letters, 2009, 95, .	3.3	55
26	Experimental observation and simulations of the self-action of white light laser pulse propagating in air. New Journal of Physics, 2004, 6, 6-6.	2.9	52
27	From Filamentation in Condensed Media to Filamentation in Gases. Journal of Nonlinear Optical Physics and Materials, 1997, 06, 485-494.	1.8	50
28	Optimization of a femtosecond pulse self-compression region along a filament in air. Applied Physics B: Lasers and Optics, 2008, 91, 35-43.	2.2	49
29	Formation and evolution of intense, post-filamentation, ionization-free low divergence beams. Optics Communications, 2011, 284, 3601-3606.	2.1	46
30	Controlling a bunch of multiple filaments by means of a beam diameter. Applied Physics B: Lasers and Optics, 2006, 82, 111-122.	2.2	41
31	Formation of extended plasma channels in a condensed medium upon axicon focusing of a femtosecond laser pulse. Quantum Electronics, 2005, 35, 1013-1014.	1.0	40
32	Array of femtosecond plasma channels in fused silica. Optics Communications, 2006, 267, 511-523.	2.1	39
33	Pulse shortening due to filamentation in transparent medium. Laser Physics Letters, 2007, 4, 126-132.	1.4	39
34	Angular distribution of the terahertz radiation intensity from the plasma channel of a femtosecond filament. JETP Letters, 2011, 93, 638-641.	1.4	36
35	Evolution and termination of a femtosecond laser filament in air. Optics Letters, 2007, 32, 3477.	3.3	35
36	Polarization rotation due to femtosecond filamentation in an atomic gas. Optics Letters, 2010, 35, 2904.	3.3	34

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37	Observation of filamentation-induced continuous self-frequency down shift in air. Applied Physics B: Lasers and Optics, 2008, 91, 219-222.	2.2	33
38	A simple method to significantly increase filamentsâ€™ length andÂionization density. Applied Physics B: Lasers and Optics, 2009, 94, 249-257.	2.2	33
39	Propagation equation for tight-focusing by a parabolic mirror. Optics Express, 2015, 23, 31240.	3.4	33
40	Optimum chirp for efficient terahertz generation from two-color femtosecond pulses in air. Applied Physics Letters, 2018, 113, .	3.3	33
41	Random deflection of the white light beam during self-focusing and filamentation of a femtosecond laser pulse in water. Applied Physics B: Lasers and Optics, 2002, 75, 595-599.	2.2	32
42	Intensity clamping in the filament of femtosecond laser radiation. Quantum Electronics, 2011, 41, 382-386.	1.0	31
43	Filamentation of femtosecond laser pulses governed by variable wavefront distortions via a deformable mirror. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 2257.	2.1	30
44	Polarization control of terahertz radiation from two-color femtosecond gas breakdown plasma. Optics Letters, 2018, 43, 90.	3.3	30
45	Self and forced periodic arrangement of multiple filaments in glass. Optics Express, 2010, 18, 1801.	3.4	29
46	Study of terahertz-radiation-induced DNA damage in human blood leukocytes. Quantum Electronics, 2014, 44, 247-251.	1.0	28
47	Supercontinuum of a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3.9</mml:mn><mml:mo>â^’</mml:mo><mml:mi>Î¼</mml:mi><mml:mathvariant="normal">m</mml:mi></mml:mrow></mml:math>filament in air: Formation of a two-octave plateau and nonlinearly enhanced linear absorption. Physical Review A, 2016, 94, .	2.5	28
48	What is a filament?. Laser Physics, 2008, 18, 962-964.	1.2	26
49	Fifteen meter long uninterrupted filaments from sub-terawatt ultraviolet pulse in air. Optics Express, 2017, 25, 25386.	3.4	26
50	A method for spatial regularisation of a bunch of filaments in a femtosecond laser pulse. Quantum Electronics, 2004, 34, 879-880.	1.0	25
51	Optimum small-scale management of random beam perturbations in a femtosecond laser pulse. Applied Physics B: Lasers and Optics, 2007, 87, 29-36.	2.2	25
52	Directionality of terahertz radiation emitted from an array of femtosecond filaments in gases. Laser Physics Letters, 2014, 11, 125401.	1.4	23
53	Few-cycle optical pulse production from collimated femtosecond laser beam filamentation. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 667.	2.1	22
54	Femtosecond laser filament in different air pressures simulating vertical propagation up to 10 km. Laser Physics Letters, 2012, 9, 868-874.	1.4	22

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55	Influence of transient self-defocusing on the propagation of high-power femtosecond laser pulses in gases under ionisation conditions. Quantum Electronics, 1994, 24, 905-911.	1.0	21
56	Laser optoacoustic diagnostics of femtosecond filaments in air using wideband piezoelectric transducers. Laser Physics Letters, 2016, 13, 095401.	1.4	20
57	Ring and unimodal angular-frequency distribution of THz emission from two-color femtosecond plasma spark. Optics Express, 2018, 26, 18202.	3.4	20
58	Waveform, spectrum, and energy of backward terahertz emission from two-color femtosecond laser induced microplasma. Applied Physics Letters, 2019, 114, .	3.3	20
59	THz generation from laser-induced breakdown in pressurized molecular gases: on the way to terahertz remote sensing of the atmospheres of Mars and Venus. New Journal of Physics, 2020, 22, 013039.	2.9	20
60	Influence of various physical factors on the generation of conical emission in the propagation of high-power femtosecond laser pulses in air. Journal of Optical Technology (A Translation of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 537 Tc	0.4	19
61	Dynamic small-scale self-focusing of a femtosecond laser pulse. Quantum Electronics, 2005, 35, 59-64.	1.0	19
62	Conical emission of a femtosecond laser pulse focused by an axicon into a K 108 glass. Quantum Electronics, 2006, 36, 821-824.	1.0	18
63	Filamentation of arbitrary polarized femtosecond laser pulses in case of high-order Kerr effect. Optics Letters, 2013, 38, 537.	3.3	18
64	Simultaneous generation of nonlinear optical harmonics and terahertz radiation in air: polarization discrimination of various nonlinear contributions. Frontiers of Optoelectronics, 2015, 8, 73-80.	3.7	18
65	Fusion of regularized femtosecond filaments in air: far field on-axis emission. Laser Physics Letters, 2016, 13, 116005.	1.4	18
66	Transverse structure and energy deposition by a subTW femtosecond laser in air: from single filament to superfilament. New Journal of Physics, 2019, 21, 033027.	2.9	16
67	Robust multifilament arrays in air by Dammann grating. Optics Express, 2021, 29, 34189-34204.	3.4	16
68	3D Raman bullet formed under filamentation of femtosecond laser pulses in air and nitrogen. Applied Physics B: Lasers and Optics, 2013, 110, 123-130.	2.2	15
69	Nonlinear increase in the energy input into a medium at the fusion of regularized femtosecond filaments. JETP Letters, 2017, 106, 561-564.	1.4	15
70	Effect of phase front modulation on the merging of multiple regularized femtosecond filaments. Laser Physics Letters, 2018, 15, 045402.	1.4	15
71	Postfilament supercontinuum on 100â€‰â€‰m path in air. Optics Letters, 2021, 46, 1125.	3.3	15
72	Flat-top THz directional diagram of a DC-biased filament. Optics Letters, 2021, 46, 5497.	3.3	15

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73	Filamentation of femtosecond Gaussian pulses with close-to-linear or -circular elliptical polarisation. Quantum Electronics, 2011, 41, 160-162.	1.0	14
74	Analysis of Dual Frequency Interaction in the Filament with the Purpose of Efficiency Control of THz Pulse Generation. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 1157-1167.	2.2	14
75	Backward Terahertz Radiation from a Two-Color Femtosecond Laser Filament. JETP Letters, 2017, 106, 706-708.	1.4	13
76	Remote triggering of air-gap discharge by a femtosecond laser filament and postfilament at distances up to 80 m. Applied Physics Letters, 2021, 119, .	3.3	13
77	Generation of polarization singularities in the self-focusing of an elliptically polarized laser beam in an isotropic Kerr medium. Physica D: Nonlinear Phenomena, 2016, 332, 73-78.	2.8	12
78	Nonlinear transparency window for ultraintense femtosecond laser pulses in the atmosphere. Physical Review A, 2019, 100, .	2.5	12
79	Femtosecond filament emergence between Ï€-shifted beamlets in air. Optics Express, 2020, 28, 1002.	3.4	12
80	All-optical attoclock for imaging tunnelling wavepackets. Nature Physics, 2022, 18, 417-422.	16.7	12
81	Ordered filaments of a femtosecond pulse in the volume of a transparent medium. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2006, 73, 778.	0.4	11
82	Measurement of birefringence inside a filament. Physical Review A, 2011, 84, .	2.5	11
83	Effect of Molecular Orbital Angular Momentum on the Spatial Distribution of Fluorescence during Femtosecond Laser Filamentation in Air. Journal of Physical Chemistry Letters, 2020, 11, 730-734.	4.6	11
84	Some Fundamental Concepts of Femtosecond Laser Filamentation. , 2008, , 243-264.		10
85	Plasma channel localisation during multiple filamentation in air. Quantum Electronics, 2007, 37, 1153-1158.	1.0	9
86	Filamentation of a femtosecond laser pulse with the initial beam ellipticity. Laser Physics, 2006, 16, 1227-1234.	1.2	8
87	Tight focusing of electromagnetic fields by large-aperture mirrors. Physical Review E, 2019, 100, 033316.	2.1	8
88	Long-range robust multifilament arrays from terawatt femtosecond beam. Laser Physics Letters, 2022, 19, 015201.	1.4	8
89	Low-Frequency Content of THz Emission from Two-Color Femtosecond Filament. Photonics, 2022, 9, 17.	2.0	8
90	Self-action effects in ionization and fragmentation of toluene by femtosecond laser pulses. Applied Physics B: Lasers and Optics, 2005, 80, 547-557.	2.2	7

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91	Enhanced fragmentation of toluene through linear and nonlinear increase of the focal spot area of an ultrashort laser pulse. Physical Review A, 2005, 71, .	2.5	7
92	Generation of optical pulses of duration down to 8 fs upon filamentation of collimated femtosecond laser radiation in argon. Quantum Electronics, 2009, 39, 879-881.	1.0	7
93	Robust near-infrared light bullet in 800-nm femtosecond light filaments in air. Applied Physics B: Lasers and Optics, 2015, 120, 383-387.	2.2	7
94	Nonlinear Enhancement of Resonance Absorption at the Filamentation of a Mid-Infrared Pulse in High-Pressure Gases. JETP Letters, 2020, 111, 31-35.	1.4	7
95	Dual-wavelength filamentation with a fraction of fundamental laser frequency as a wideband THz source. Laser Physics Letters, 2021, 18, 025401.	1.4	7
96	Third-harmonic generation from regularized converging filaments. Journal of the Optical Society of America B: Optical Physics, 2019, 36, A66.	2.1	7
97	Multiple Filamentation Effects on THz Radiation Pattern from Laser Plasma in Air. Photonics, 2021, 8, 4.	2.0	7
98	Filamentation of femtosecond laser radiation with a non-Gaussian transverse spatial profile. Quantum Electronics, 2011, 41, 958-962.	1.0	6
99	Laser-induced plasma influence onto intrapulse four-wave mixing under femtosecond filamentation in air. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 094017.	1.5	6
100	Near-infrared conical emission from 800â€‰nm filament in air. Laser Physics Letters, 2017, 14, 035401.	1.4	6
101	Balance of emission from THz sources in DC-biased and unbiased filaments in air. Optics Express, 2021, 29, 40687.	3.4	6
102	The Focal Length Effect on Energy Absorption and Terahertz Generation upon Focusing Two-Color Radiation in Air. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.4	6
103	Genetic algorithm for the location control of femtosecond laser filament. Scientific Reports, 2020, 10, 12878.	3.3	5
104	Tracing Air-Breakdown Plasma Characteristics from Single-Color Filament Terahertz Spectra. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1105-1113.	2.2	5
105	Spatiotemporal instability of an intense subpicosecond laser pulse in gases. Quantum Electronics, 1997, 27, 441-444.	1.0	4
106	Investigation of the transformation of the spectrum of femtosecond laser radiation on filamentation in gas medium. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2009, 107, 429-434.	0.6	4
107	The optical waveguide generated by acoustic waves emitted from femtoseconds filaments. , 2016, , .		4
108	Spatial filtering of radiation from wire lasers. Laser Physics Letters, 2017, 14, 045001.	1.4	4

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109	Influence of the Tilting Angle of a BBO Crystal on the Terahertz Radiation Produced by a Dual-Color Femtosecond Laser. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 669-674.	3.1	4
110	Terahertz emission from a single-color ultraviolet filament. Laser Physics Letters, 2019, 16, 105403.	1.4	4
111	Transformation of the frequency-angular spectrum of THz emissions produced by a single-color laser filament under an external electrostatic field of various strength. Laser Physics Letters, 2021, 18, 115401.	1.4	4
112	Superposition of 2Ï‰ and Electrostatic Field Induced Terahertz Waveforms in DC-Biased Two-Color Filament. Applied Sciences (Switzerland), 2021, 11, 11888.	2.5	4
113	Interdigitated photoconductive antenna-based two-color femtosecond laser filamentation THz time-domain spectral detection. Optics Express, 2022, 30, 18562.	3.4	4
114	Controlling the bunch of filaments formed by high-power femtosecond laser pulse in air. , 2005, , .		3
115	Spatio-temporal control of femtosecond laser pulse filamentation in the atmosphere. , 2007, 6733, 369.		3
116	Femtosecond filaments as a new type of laser guide stars for astronomical adaptive optics. Quantum Electronics, 2009, 39, 560-565.	1.0	3
117	Single-cycle pulse generation in the course of four-wave mixing in the filament. , 2012, , .		3
118	Four-wave mixing in molecular gases under filamentation of the collimated femtosecond beam. Laser Physics Letters, 2014, 11, 125302.	1.4	3
119	Fabricating THz spiral zone plate by high throughput femtosecond laser air filament direct writing. Scientific Reports, 2020, 10, 13965.	3.3	3
120	Tracing Evolution of Angle-Wavelength Spectrum along the 40-m Postfilament in Corridor Air. Photonics, 2021, 8, 446.	2.0	3
121	The Physics of Intense Femtosecond Laser Filamentation. Topics in Applied Physics, 2009, , 349-370.	0.8	2
122	Symmetry Breaking and Strong Persistent Plasma Currents via Resonant Destabilization of Atoms. Physical Review Letters, 2017, 119, 243202.	7.8	2
123	Continuous transition from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="sans-serif">X</mml:mi></mml:math> - to <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="sans-serif">O</mml:mi></mml:math> -shaped angle-wavelength spectra of a femtosecond filament in a gas mixture. Physical Review A, 2021, 103, .	2.5	2
124	Conversion of high-power femtosecond laser pulse to supercontinuum in atmospheric air. , 2003, 4976, 159.		1
125	Self-focusing and Filamentation of Powerful Femtosecond Laser Pulses. Topics in Applied Physics, 2009, , 371-398.	0.8	1
126	Spectrum and polarization of THz radiation from two-color femtosecond laser breakdown: Theory and experiment. , 2015, , .		1

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127	3D terahertz beam profiling from two color laser induced plasma with different focusing. EPJ Web of Conferences, 2017, 149, 05011.	0.3	1
128	Spectrally selective modulation of terahertz radiation beams. Quantum Electronics, 2020, 50, 1029-1033.	1.0	1
129	Efficient Multifocal Structured Illumination Microscopy Utilizing a Spatial Light Modulator. Applied Sciences (Switzerland), 2020, 10, 4396.	2.5	1
130	<title>Scattering of the ultrashort ionizing laser pulse in gas</title>. , 1996, , .		0
131	<title>Regularization of multiple filaments in atmospheric turbulence</title>. , 2006, 6255, 212.		0
132	Improved reproducibility of conical emission from glass under axicon focusing of femtosecond laser pulse. Proceedings of SPIE, 2007, , .	0.8	0
133	Few cycle powerful pulse production under filamention in gaseous media without external compressor. , 2008, , .		0
134	Spectral “soliton” transformation and four-wave mixing under femtosecond laser radiation filamentation in molecular gases. , 2009, , .		0
135	Femtosecond coherent control of THz spectra driven by free- and coupled electrons in gas plasma. , 2013, , .		0
136	Femtosecond coherent control of THz spectra driven by free- and coupled electrons in gas plasma. , 2013, , .		0
137	Spatio-spectral characteristics of THz radiation from two-color femtosecond filament. , 2015, , .		0
138	Polarization Of THz radiation generated during two-color filamentation of arbitrarily polarized laser pulses. , 2016, , .		0
139	Filamentation of four beams under focusing in air. , 2016, , .		0
140	Nonlinearly enhanced linear absorption under filamentation in mid-infrared (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 Td (F		0
141	Backward terahertz emission from two-color laser induced plasma spark. EPJ Web of Conferences, 2018, 195, 03010.	0.3	0
142	Terahertz generation from single and multiple filaments in air. EPJ Web of Conferences, 2018, 195, 03013.	0.3	0
143	Nonpertubing diagnostics of multiple filamentation and superfilamentation of powerful femtosecond laser pulses in air. , 2018, , .		0
144	Polarization Singularities Nucleation in the Self-focusing of an Elliptically Polarized Laser Beam in Kerr Medium and Isotropic Phase of Nematic Liquid Crystal. Springer Series in Chemical Physics, 2019, , 3-17.	0.2	0

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145	Acoustic Signal for Femtosecond Filament Plasma Grating Characterization in Air. Springer Series in Chemical Physics, 2019, , 343-353.	0.2	0
146	Dispersion Management of Mid-Infrared Filamentation in Dense Gases. , 2021, , .		0
147	Ultrafast laser filamentation control techniques for remote applications. , 2009, , .		0
148	Terahertz and Mid-Infrared Radiation from Femtosecond Filaments in Gases. Springer Series in Chemical Physics, 2017, , 35-43.	0.2	0
149	From loosely focused multifilamentation to superfilamentation: effect of focusing conditions. , 2019, , .		0
150	Enhancement of third harmonic yield in fused filaments due to Gouy shift suppression. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 1406.	2.1	0
151	Water vapor based dispersion management in a high-pressure gas cell. Journal of Physics: Conference Series, 2020, 1692, 012019.	0.4	0
152	Optimization of terahertz production from femtosecond multi- and superfilaments in air. , 2020, , .		0