

Jerome Kasparian

List of Publications by Citations

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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.

154
papers

6,757
citations

42
h-index

79
g-index

182
ext. papers

7,738
ext. citations

4.5
avg, IF

5.39
L-index

#	Paper	IF	Citations
154	Ultrashort filaments of light in weakly ionized, optically transparent media. <i>Reports on Progress in Physics</i> , 2007 , 70, 1633-1713	14.4	770
153	White-light filaments for atmospheric analysis. <i>Science</i> , 2003 , 301, 61-4	33.3	687
152	The critical laser intensity of self-guided light filaments in air. <i>Applied Physics B: Lasers and Optics</i> , 2000 , 71, 877-879	1.9	336
151	Physics and applications of atmospheric nonlinear optics and filamentation. <i>Optics Express</i> , 2008 , 16, 466-93	3.3	270
150	Triggering and guiding megavolt discharges by use of laser-induced ionized filaments. <i>Optics Letters</i> , 2002 , 27, 772-4	3	220
149	Kilometer-range nonlinear propagation of femtosecond laser pulses. <i>Physical Review E</i> , 2004 , 69, 036607-4	2.4	215
148	Long-distance remote laser-induced breakdown spectroscopy using filamentation in air. <i>Applied Physics Letters</i> , 2004 , 85, 3977-3979	3.4	202
147	Higher-order Kerr terms allow ionization-free filamentation in gases. <i>Physical Review Letters</i> , 2010 , 104, 103903	7.4	200
146	Infrared extension of the super continuum generated by femtosecond terawatt laser pulses propagating in the atmosphere. <i>Optics Letters</i> , 2000 , 25, 1397-9	3	171
145	Laser-induced water condensation in air. <i>Nature Photonics</i> , 2010 , 4, 451-456	33.9	140
144	Multiple filamentation of terawatt laser pulses in air. <i>Physical Review Letters</i> , 2004 , 92, 225002	7.4	139
143	Teramobile: A mobile femtosecond-terawatt laser and detection system. <i>EPJ Applied Physics</i> , 2002 , 20, 183-190	1.1	136
142	Electric events synchronized with laser filaments in thunderclouds. <i>Optics Express</i> , 2008 , 16, 5757-63	3.3	120
141	Ultraintense light filaments transmitted through clouds. <i>Applied Physics Letters</i> , 2003 , 83, 213-215	3.4	117
140	Microtubule structure at improved resolution. <i>Biochemistry</i> , 2001 , 40, 8000-8	3.2	112
139	Compression of 1.8 fs laser pulses to sub two optical cycles with bulk material. <i>Applied Physics Letters</i> , 2010 , 96, 121109	3.4	103
138	Remote LIBS with ultrashort pulses: characteristics in picosecond and femtosecond regimes. <i>Journal of Analytical Atomic Spectrometry</i> , 2004 , 19, 437-444	3.7	98

137	Filamentation of femtosecond light pulses in the air: turbulent cells versus long-range clusters. <i>Physical Review E</i> , 2004 , 70, 046602	2.4	88
136	Transition from plasma-driven to Kerr-driven laser filamentation. <i>Physical Review Letters</i> , 2011 , 106, 243902	3.1	82
135	Filament-induced remote surface ablation for long range laser-induced breakdown spectroscopy operation. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2005 , 60, 1025-1033	3.1	82
134	Remote detection and identification of biological aerosols using a femtosecond terawatt lidar system. <i>Applied Physics B: Lasers and Optics</i> , 2004 , 78, 535-537	1.9	77
133	Multifilamentation transmission through fog. <i>Physical Review E</i> , 2005 , 72, 026611	2.4	72
132	Supercontinuum emission and enhanced self-guiding of infrared femtosecond filaments sustained by third-harmonic generation in air. <i>Physical Review E</i> , 2005 , 71, 016602	2.4	70
131	Towards a supercontinuum-based infrared lidar. <i>Applied Physics B: Lasers and Optics</i> , 2003 , 77, 357-359	1.9	69
130	Sonographic probing of laser filaments in air. <i>Applied Optics</i> , 2003 , 42, 7117-20	1.7	66
129	Propagation of fs TW laser filaments in adverse atmospheric conditions. <i>Applied Physics B: Lasers and Optics</i> , 2005 , 80, 785-789	1.9	66
128	Backward supercontinuum emission from a filament generated by ultrashort laser pulses in air. <i>Optics Letters</i> , 2001 , 26, 533-5	3	64
127	Field measurements suggest the mechanism of laser-assisted water condensation. <i>Nature Communications</i> , 2011 , 2, 456	17.4	60
126	White light generation over three octaves by femtosecond filament at 3.9 μm in argon. <i>Optics Letters</i> , 2012 , 37, 3456-8	3	58
125	Optical rogue wave statistics in laser filamentation. <i>Optics Express</i> , 2009 , 17, 12070-5	3.3	57
124	Generalized Miller formulae. <i>Optics Express</i> , 2010 , 18, 6613-20	3.3	56
123	Laser filaments generated and transmitted in highly turbulent air. <i>Optics Letters</i> , 2006 , 31, 86-8	3	56
122	Triggering and guiding of megavolt discharges by laser-induced filaments under rain conditions. <i>Applied Physics Letters</i> , 2004 , 85, 5781-5783	3.4	53
121	Mobile source of high-energy single-cycle terahertz pulses. <i>Applied Physics B: Lasers and Optics</i> , 2010 , 101, 11-14	1.9	52
120	Improved laser triggering and guiding of megavolt discharges with dual fs-ns pulses. <i>Applied Physics Letters</i> , 2006 , 88, 021101	3.4	52

119	Propagation of laser filaments through an extended turbulent region. <i>Applied Physics Letters</i> , 2007 , 91, 171106	3.4	48
118	Production of ozone and nitrogen oxides by laser filamentation. <i>Applied Physics Letters</i> , 2010 , 97, 021108	3.4	47
117	Nonlinear fast growth of water waves under wind forcing. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014 , 378, 1025-1030	2.3	44
116	Mid-infrared laser filamentation in molecular gases. <i>Optics Letters</i> , 2013 , 38, 3194-7	3	44
115	Angular Dependences of Third Harmonic Generation from Microdroplets. <i>Physical Review Letters</i> , 1997 , 78, 2952-2955	7.4	43
114	High-field quantum calculation reveals time-dependent negative Kerr contribution. <i>Physical Review Letters</i> , 2013 , 110, 043902	7.4	42
113	Influence of negative leader propagation on the triggering and guiding of high voltage discharges by laser filaments. <i>Applied Physics B: Lasers and Optics</i> , 2006 , 82, 561-566	1.9	42
112	Characterization of urban aerosols using SEM-microscopy, X-ray analysis and Lidar measurements. <i>Atmospheric Environment</i> , 1998 , 32, 2957-2967	5.3	41
111	Digital computation and in situ STM approach of silicon anisotropic etching. <i>Surface Science</i> , 1997 , 388, 50-62	1.8	40
110	Optimal control of filamentation in air. <i>Applied Physics Letters</i> , 2006 , 89, 171117	3.4	40
109	On negative higher-order Kerr effect and filamentation. <i>Laser Physics</i> , 2011 , 21, 1319-1328	1.2	36
108	Ultrafast gaseous "half-wave plate". <i>Optics Express</i> , 2008 , 16, 7564-70	3.3	35
107	Mechanism of hollow-core-fiber infrared-supercontinuum compression with bulk material. <i>Physical Review A</i> , 2010 , 81,	2.6	34
106	Free space laser telecommunication through fog. <i>Optica</i> , 2018 , 5, 1338	8.6	32
105	Saturation of the filament density of ultrashort intense laser pulses in air. <i>Applied Physics B: Lasers and Optics</i> , 2010 , 100, 77-84	1.9	31
104	White-light filaments for multiparameter analysis of cloud microphysics. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005 , 22, 369	1.7	30
103	UV Supercontinuum generated by femtosecond pulse filamentation in air: Meter-range experiments versus numerical simulations. <i>Applied Physics B: Lasers and Optics</i> , 2006 , 82, 341-345	1.9	29
102	Ultraviolet-visible conical emission by multiple laser filaments. <i>Optics Express</i> , 2009 , 17, 4726-31	3.3	28

101	32TW atmospheric white-light laser. <i>Applied Physics Letters</i> , 2007 , 90, 151106	3.4	28
100	Laser-induced plasma cloud interaction and ice multiplication under cirrus cloud conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 10106-10	11.5	24
99	Modulational instability in wind-forced waves. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014 , 378, 3626-3630	2.3	23
98	Spectral dependence of purely-Kerr-driven filamentation in air and argon. <i>Physical Review A</i> , 2010 , 82,	2.6	23
97	Contribution of water droplets to charge release by laser filaments in air. <i>Applied Physics Letters</i> , 2009 , 95, 091107	3.4	23
96	Amplification of intense light fields by nearly free electrons. <i>Nature Physics</i> , 2018 , 14, 695-700	16.2	22
95	Laser filament-induced aerosol formation. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 4593-4604	6.8	22
94	A new transient SRS analysis method of aerosols and application to a nonlinear femtosecond lidar. <i>Optics Communications</i> , 1998 , 152, 355-360	2	21
93	OECD's Better Life Index—Can any country be well ranked?. <i>Journal of Applied Statistics</i> , 2012 , 39, 2223-2230		20
92	Applied physics. Laser beams take a curve. <i>Science</i> , 2009 , 324, 194-5	33.3	20
91	From higher-order Kerr nonlinearities to quantitative modeling of third and fifth harmonic generation in argon. <i>Optics Letters</i> , 2011 , 36, 828-30	3	19
90	White-light femtosecond Lidar at 100 TW power level. <i>Applied Physics B: Lasers and Optics</i> , 2014 , 114, 319-325	1.9	18
89	Modelling of HNO ₃ -mediated laser-induced condensation: a parametric study. <i>Journal of Chemical Physics</i> , 2011 , 135, 134703	3.9	18
88	Spectral up- and downshifting of Akhmediev breathers under wind forcing. <i>Physics of Fluids</i> , 2017 , 29, 107103	4.4	17
87	Multijoule scaling of laser-induced condensation in air. <i>Applied Physics Letters</i> , 2011 , 99, 141103	3.4	17
86	Influence of pulse duration, energy, and focusing on laser-assisted water condensation. <i>Applied Physics Letters</i> , 2011 , 98, 041105	3.4	17
85	Co-existing climate attractors in a coupled aquaplanet. <i>Climate Dynamics</i> , 2019 , 53, 6293-6308	4.2	16
84	Spectral correlation and noise reduction in laser filaments. <i>Applied Physics B: Lasers and Optics</i> , 2007 , 87, 1-4	1.9	16

83	Non-linear photochemical pathways in laser-induced atmospheric aerosol formation. <i>Scientific Reports</i> , 2015 , 5, 14978	4.9	15
82	Arbitrary-order nonlinear contribution to self-steepening. <i>Optics Letters</i> , 2010 , 35, 2795-7	3	15
81	White-light symmetrization by the interaction of multifilamenting beams. <i>Physical Review A</i> , 2009 , 79,	2.6	15
80	Dual-color co-filamentation in Argon. <i>Optics Express</i> , 2008 , 16, 14115-27	3.3	15
79	Ray-tracing simulation of ionization-free filamentation. <i>Applied Physics B: Lasers and Optics</i> , 2004 , 79, 947-951	1.9	15
78	Modifications to the lidar equation due to nonlinear propagation in air. <i>Applied Physics B: Lasers and Optics</i> , 2001 , 73, 157-163	1.9	15
77	Laser-assisted water condensation in the atmosphere: a step towards modulating precipitation?. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 293001	3	14
76	Laser-induced condensation by ultrashort laser pulses at 248 nm. <i>Applied Physics Letters</i> , 2013 , 102, 091112	3.12	14
75	Conical emission from laser filaments and higher-order Kerr effect in air. <i>Optics Letters</i> , 2011 , 36, 4812-43		14
74	1-J white-light continuum from 100-TW laser pulses. <i>Physical Review A</i> , 2011 , 83,	2.6	13
73	Higher-order Kerr improve quantitative modeling of laser filamentation. <i>Optics Letters</i> , 2012 , 37, 4347-93		13
72	Laser vaporization of cirrus-like ice particles with secondary ice multiplication. <i>Science Advances</i> , 2016 , 2, e1501912	14.3	13
71	Nonlinear stage of Benjamin-Feir instability in forced/damped deep-water waves. <i>Physics of Fluids</i> , 2018 , 30, 017102	4.4	12
70	Recurrence in the high-order nonlinear Schrödinger equation: A low-dimensional analysis. <i>Physical Review E</i> , 2017 , 96, 012222	2.4	12
69	Remote electrical arc suppression by laser filamentation. <i>Optics Express</i> , 2015 , 23, 28640-8	3.3	12
68	Laser filamentation as a new phase transition universality class. <i>Physical Review Letters</i> , 2015 , 114, 063903	3.1	12
67	High repetition rate ultrashort laser cuts a path through fog. <i>Applied Physics Letters</i> , 2016 , 109, 251105	3.4	12
66	Conductivity and discharge guiding properties of mid-IR laser filaments. <i>Applied Physics B: Lasers and Optics</i> , 2016 , 122, 1	1.9	10

65	Laser-Based Weather Control. <i>Optics and Photonics News</i> , 2010 , 21, 22	1.9	10
64	Assessing the Dynamics of Organic Aerosols over the North Atlantic Ocean. <i>Scientific Reports</i> , 2017 , 7, 45476	4.9	9
63	Progress towards lightning control using lasers. <i>Journal of the European Optical Society-Rapid Publications</i> , 2008 , 3,	2.5	9
62	Size dependence of nonlinear Mie scattering in microdroplets illuminated by ultrashort pulses. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1998 , 15, 1918	1.7	9
61	The laser lightning rod project. <i>EPJ Applied Physics</i> , 2021 , 93, 10504	1.1	9
60	Optimal laser-pulse energy partitioning for air ionization. <i>Physical Review A</i> , 2016 , 94,	2.6	8
59	Cooperative effect of ultraviolet and near-infrared beams in laser-induced condensation. <i>Applied Physics Letters</i> , 2013 , 103, 264103	3.4	8
58	Nonlinear synthesis of complex laser waveforms at remote distances. <i>Physical Review A</i> , 2015 , 91,	2.6	8
57	Cross compression of light bullets by two-color cofilamentation. <i>Physical Review A</i> , 2008 , 78,	2.6	8
56	Laser noise reduction in air. <i>Applied Physics Letters</i> , 2006 , 88, 251112	3.4	8
55	Three-Dimensional Analysis of Urban Aerosols by use of a Combined Lidar, Scanning Electron Microscopy, and X-Ray Microanalysis. <i>Applied Optics</i> , 1998 , 37, 2231-7	1.7	8
54	Spin-Glass Model Governs Laser Multiple Filamentation. <i>Physical Review Letters</i> , 2015 , 115, 033902	7.4	7
53	Multiple filamentation of non-uniformly focused ultrashort laser pulses. <i>Applied Physics B: Lasers and Optics</i> , 2009 , 94, 243-247	1.9	7
52	Curved plasma channels: Kerr lens and Airy prism. <i>Journal of the European Optical Society-Rapid Publications</i> , 2009 , 4,	2.5	7
51	Triggering filamentation using turbulence. <i>Physical Review A</i> , 2016 , 94,	2.6	6
50	HV discharge acceleration by sequences of UV laser filaments with visible and near-infrared pulses. <i>New Journal of Physics</i> , 2017 , 19, 123040	2.9	6
49	Contribution of crude oil price to households budget: The weight of indirect energy use. <i>Energy Policy</i> , 2009 , 37, 111-114	7.2	6
48	Effects of atmospheric turbulence on remote optimal control experiments. <i>Applied Physics Letters</i> , 2008 , 92, 041103	3.4	6

47	Performance of one-dimensional hydrodynamic lake models during short-term extreme weather events. <i>Environmental Modelling and Software</i> , 2020 , 133, 104852	5.2	6
46	Gas-Solid Phase Transition in Laser Multiple Filamentation. <i>Physical Review Letters</i> , 2017 , 118, 133902	7.4	5
45	Single-spectrum prediction of kurtosis of water waves in a nonconservative model. <i>Physical Review E</i> , 2019 , 100, 013102	2.4	5
44	Ultrafast laser spectroscopy and control of atmospheric aerosols. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 9291-300	3.6	5
43	Filament-induced birefringence in Argon. <i>Laser Physics</i> , 2009 , 19, 336-341	1.2	5
42	Angular distribution of non-linear optical emission from spheroidal microparticles. <i>Applied Physics B: Lasers and Optics</i> , 2008 , 91, 167-171	1.9	5
41	Monte-Carlo Simulations of Si Etching: Comparison with in-situ STM images. <i>Microscopy Microanalysis Microstructures</i> , 1994 , 5, 257-267		5
40	Shifting velocity of temperature extremes under climate change. <i>Environmental Research Letters</i> , 2020 , 15, 034027	6.2	4
39	Dual-scale turbulence in filamenting laser beams at high average power. <i>Physical Review A</i> , 2016 , 94,	2.6	4
38	Reversibility of laser filamentation. <i>Optics Express</i> , 2014 , 22, 21061-8	3.3	4
37	Ultrashort filaments of light in weakly ionized, optically transparent media. <i>Reports on Progress in Physics</i> , 2008 , 71, 109801	14.4	4
36	Spatial Break-up of Femtosecond Laser Pulses in the Atmosphere. <i>Physica Scripta</i> , 2004 , T107, 135	2.6	4
35	The role of internal feedbacks in shifting deep lake mixing regimes under a warming climate. <i>Freshwater Biology</i> , 2021 , 66, 1021-1035	3.1	4
34	Time-resolved monitoring of polycyclic aromatic hydrocarbons adsorbed on atmospheric particles. <i>Environmental Science and Pollution Research</i> , 2017 , 24, 19517-19523	5.1	3
33	Filaments of Light. <i>American Scientist</i> , 2006 , 94, 150	2.7	3
32	HV discharges triggered by dual- and triple-frequency laser filaments. <i>Optics Express</i> , 2019 , 27, 11339-11347	3.5	3
31	Ab initio calculations of laser-atom interactions revealing harmonics feedback during macroscopic propagation. <i>Physical Review A</i> , 2019 , 99,	2.6	2
30	Energy conservation in self-phase modulation. <i>Physical Review A</i> , 2018 , 97,	2.6	2

29	On Lightning Control Using Lasers. <i>Springer Series in Chemical Physics</i> , 2010 , 109-122	0.3	2
28	Non-linear effects accompanying terawatt laser-pulse in air and their applications 2006 , 6158, 133		2
27	Femtosecond LIDAR: new perspectives of atmospheric remote sensing 2003 , 5149, 135		2
26	Drivers of phytoplankton responses to summer wind events in a stratified lake: A modeling study. <i>Limnology and Oceanography</i> ,	4.8	2
25	Viscous damping of gravity-capillary waves: Dispersion relations and nonlinear corrections. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	2
24	Stabilization of Unsteady Nonlinear Waves by Phase-Space Manipulation. <i>Physical Review Letters</i> , 2021 , 126, 174501	7.4	2
23	Maximizing energy deposition by shaping few-cycle laser pulses. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2018 , 51, 135402	1.3	2
22	Laser pulse propagation in a meter scale rubidium vapor/plasma cell in AWAKE experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016 , 829, 339-342	1.2	1
21	Pump-probe differential Lidar to quantify atmospheric supersaturation and particle-forming trace gases. <i>Applied Physics B: Lasers and Optics</i> , 2014 , 117, 667-672	1.9	1
20	Shockwave-assisted laser filament conductivity. <i>Applied Physics Letters</i> , 2017 , 111, 211103	3.4	1
19	Mid-Infrared femtosecond filament and three octaves continuum generation in gases. <i>EPJ Web of Conferences</i> , 2013 , 41, 10003	0.3	1
18	Ultrashort laser applications in lidar and atmospheric sciences 2003 , 5226, 238		1
17	Robustness of competing climatic states. <i>Journal of Climate</i> , 2022 , 1-59	4.4	1
16	Laser filament-induced aerosol formation		1
15	Some Properties of Femtosecond Laser Filamentation Relevant to Atmospheric Applications Part II. Large-Scale Filamentation. <i>Springer Series in Chemical Physics</i> , 2007 , 301-318	0.3	1
14	Stabilization of uni-directional water wave trains over an uneven bottom. <i>Nonlinear Dynamics</i> , 2020 , 101, 1131-1145	5	1
13	Quantitative analysis of self-organized patterns in ombrotrophic peatlands. <i>Scientific Reports</i> , 2019 , 9, 1499	4.9	1
12	Modifications of filament spectra by shaped octave-spanning laser pulses. <i>Physical Review A</i> , 2018 , 98,	2.6	1

11	Separatrix crossing and symmetry breaking in NLSE-like systems due to forcing and damping. <i>Nonlinear Dynamics</i> , 2020 , 102, 2385-2398	5	o
10	Multi-column modelling of lake Geneva for climate applications.. <i>Scientific Reports</i> , 2022 , 12, 353	4.9	o
9	Laser induced aerosol formation mediated by resonant excitation of volatile organic compounds. <i>Optica</i> , 2021 , 8, 1256	8.6	o
8	Nonlinear wave evolution with data-driven breaking.. <i>Nature Communications</i> , 2022 , 13, 2343	17.4	o
7	Linearity of charge measurement in laser filaments. <i>Optics Express</i> , 2017 , 25, 16517-16526	3.3	
6	Higher-order Kerr effects improve quantitative modelling of harmonics generation and laser filamentation. <i>EPJ Web of Conferences</i> , 2013 , 41, 12007	0.3	
5	Laser Filament Induced Water Condensation. <i>EPJ Web of Conferences</i> , 2013 , 41, 12008	0.3	
4	Monitoring of urban aerosols using a combined lidar/SEM method 1997 , 3104, 278		
3	Some Properties of Femtosecond Laser Filamentation Relevant to Atmospheric Applications Part I. The Robustness of Filamentation. <i>Springer Series in Chemical Physics</i> , 2007 , 281-300	0.3	
2	Filament-induced electric events in thunderstorms. <i>Springer Series in Chemical Physics</i> , 2009 , 967-969	0.3	
1	Smooth velocity fields for tracking climate change.. <i>Scientific Reports</i> , 2022 , 12, 2997	4.9	