Luc Berge

List of Publications by Year
in descending order

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115 papers	6,341 citations	81900 39 h-index	66911 78 g-index
115 all docs	115 docs citations	115 times ranked	2175 citing authors

#	Article	IF	Citations
1	All-optical attoclock for imaging tunnelling wavepackets. Nature Physics, 2022, 18, 417-422.	16.7	12
2	Air-photonics terahertz platform with versatile micro-controller based interface and data acquisition. Review of Scientific Instruments, 2022, 93, 033004.	1.3	4
3	Terahertz Pulse Generation by Strongly Magnetized, Laser-Created Plasmas. Physical Review Letters, 2022, 128, 174802.	7.8	18
4	Terahertz pulse generation by multi-color laser fields with linear vs. circular polarization. , 2021, , .		0
5	Terahertz emissions by plasmas created from moderate to relativistic laser intensities. , 2021, , .		0
6	Terahertz pulse generation by multi-color laser fields with linear versus circular polarization. Optics Letters, 2021, 46, 5906.	3.3	4
7	Terahertz emission from submicron solid targets irradiated by ultraintense femtosecond laser pulses. Physics of Plasmas, 2020, 27, .	1.9	18
8	Terahertz pulse generation by two-color laser fields with circular polarization. New Journal of Physics, 2020, 22, 103038.	2.9	32
9	Terahertz pulses generated by classical or relativistic laser-gas interaction: Sources and Applications. , 2020, , .		0
10	Terahertz spectroscopy from air plasmas created by two-color femtosecond laser pulses: The ALTESSE project. Europhysics Letters, 2019, 126, 24001.	2.0	39
11	THz Generation from Relativistic Plasmas Driven by Near- to Far-Infrared Laser Pulses. Physical Review Letters, 2019, 123, 264801.	7.8	24
12	Wavelength scaling of terahertz pulse energies delivered by two-color air plasmas. Optics Letters, 2019, 44, 1488.	3.3	38
13	Intensity modulated terahertz vortex wave generation in air plasma by two-color femtosecond laser pulses. Optics Letters, 2019, 44, 3889.	3.3	18
14	Vortex terahertz wave generation in air by femtosecond optical vortex pulses. , 2019, , .		1
15	Terahertz Pulse Generation in Underdense Relativistic Plasmas: From Photoionization-Induced Radiation to Coherent Transition Radiation. Physical Review Letters, 2018, 120, 144801.	7.8	42
16	THz field engineering in two-color femtosecond filaments using chirped and delayed laser pulses. New Journal of Physics, 2018, 20, 033026.	2.9	28
17	Broadband terahertz radiation from two-color mid- and far-infrared laser filaments in air. Physical Review A, 2018, 97, .	2.5	39
18	Terahertz emission from laser-driven gas plasmas: a plasmonic point of view. Optica, 2018, 5, 1617.	9.3	15

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19	Validity of the unidirectional propagation model: application to laser-driven terahertz emission. Journal of Physics Communications, 2017, 1, 055009.	1.2	2
20	Broadband terahertz emission from two-color femtosecond-laser-induced microplasmas. Physical Review A, 2017, 96, .	2.5	13
21	Spectral dynamics of THz pulses generated by two-color laser filaments in air: the role of Kerr nonlinearities and pump wavelength. Optics Express, 2017, 25, 4720.	3.4	46
22	Theory of terahertz emission from femtosecond-laser-induced microplasmas. Physical Review E, 2016, 94, 063202.	2.1	26
23	Ultrabroad Terahertz Spectrum Generation from an Air-Based Filament Plasma. Physical Review Letters, 2016, 116, 063902.	7.8	202
24	Terahertz radiation driven by two-color laser pulses at near-relativistic intensities: Competition between photoionization and wakefield effects. Scientific Reports, 2016, 6, 26743.	3.3	33
25	Foreword on the special issue on the science of light. Europhysics News, 2015, 46, 12-12.	0.3	0
26	Boosting Terahertz Generation in Laser-Field Ionized Gases Using a Sawtooth Wave Shape. Physical Review Letters, 2015, 114, 183901.	7.8	87
27	Nonmonotonic increase in laser-driven THz emissions through multiple ionization events. Physical Review A, 2015, 91, .	2.5	11
28	Spectral self-action of THz emission from ionizing two-color laser pulses in gases. New Journal of Physics, 2015, 17, 023060.	2.9	14
29	Directionality of terahertz radiation emitted from an array of femtosecond filaments in gases. Laser Physics Letters, 2014, 11, 125401.	1.4	23
30	Influence of multiple ionization in laser filamentation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 204017.	1.5	6
31	Analytical model for THz emissions induced by laser-gas interaction. Optics Express, 2014, 22, 13691.	3.4	47
32	Interplay between stimulated Brillouin scattering and Kerr filamentation with an inertial plasma response. Physical Review A, 2014, 89, .	2.5	1
33	The fundamental solution of the unidirectional pulse propagation equation. Journal of Mathematical Physics, 2014, 55, 032903.	1.1	8
34	Enhanced self-compression of mid-infrared laser filaments in argon. Physical Review A, 2013, 88, .	2.5	46
35	GPU accelerated fully space and time resolved numerical simulations of self-focusing laser beams in SBS-active media. Journal of Computational Physics, 2013, 235, 606-625.	3.8	9
36	3D Numerical Simulations of THz Generation by Two-Color Laser Filaments. Physical Review Letters, 2013, 110, 073901.	7.8	125

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37	Tailoring terahertz radiation by controlling tunnel photoionization events in gases. New Journal of Physics, 2011, 13, 123029.	2.9	168
38	Directionality of terahertz emission from photoinduced gas plasmas. Optics Letters, 2011, 36, 3166.	3.3	23
39	Role of the carrier-envelope phase in laser filamentation. Applied Physics B: Lasers and Optics, 2011, 103, 563-570.	2.2	78
40	Effect of nonlinear dispersion on pulse self-compression in a defocusing noble gas. Physica D: Nonlinear Phenomena, 2011, 240, 963-970.	2.8	4
41	Filamentary pulse self-compression: The impact of the cell windows. Physical Review A, 2011, 83, .	2.5	10
42	Plasma induced pulse breaking in filamentary self-compression. Laser Physics, 2010, 20, 1107-1113.	1.2	14
43	Saturation of the filament density of ultrashort intense laser pulses in air. Applied Physics B: Lasers and Optics, 2010, 100, 77-84.	2.2	40
44	Compression of ultrashort UV pulses in a self-defocusing gas. Physical Review A, 2010, 81, .	2.5	2
45	Ultrafast Spatiotemporal Dynamics of Terahertz Generation by Ionizing Two-Color Femtosecond Pulses in Gases. Physical Review Letters, 2010, 105, 053903.	7.8	168
46	Self-focusing versus stimulated Brillouin scattering of laser pulses in fused silica. New Journal of Physics, 2010, 12, 103049.	2.9	13
47	Self-pinching of pulsed laser beams during filamentary propagation. Optics Express, 2009, 17, 16429.	3.4	18
48	Self-recompression of laser filaments exiting a gas cell. Physical Review A, 2009, 79, .	2.5	27
49	Control of lasing filament arrays in nonlinear liquid media. Applied Physics B: Lasers and Optics, 2008, 90, 383-390.	2.2	8
50	Few-Cycle Light Bullets Created by Femtosecond Filaments. Physical Review Letters, 2008, 100, 113902.	7.8	73
51	Sub-2fs pulses generated by self-channeling in the deep ultraviolet. Optics Letters, 2008, 33, 750.	3.3	19
52	Self-compression of 2 Î¼m laser filaments. Optics Express, 2008, 16, 21529.	3.4	48
53	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>(</mml:mo><mml:mn>3</mml:mn><mml:mo>+</mml:mo><mml:mn>1</mml:mn><mml:mo numerical simulations of femtosecond laser filaments in air: Toward a quantitative agreement with experiments. Physical Review E, 2008, 77, 036406.	2.1	38
54	Temporal Self-Restoration of Compressed Optical Filaments. Physical Review Letters, 2008, 101, 213901.	7.8	43

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55	32TW atmospheric white-light laser. Applied Physics Letters, 2007, 90, 151106.	3.3	34
56	Ultrashort filaments of light in weakly ionized, optically transparent media. Reports on Progress in Physics, 2007, 70, 1633-1713.	20.1	939
57	Supercontinuum generation of ultrashort laser pulses in air at different central wavelengths. Optics Communications, 2007, 280, 173-182.	2.1	28
58	Long-range multifilamentation of femtosecond laser pulses versus air pressure. Optics Letters, 2006, 31, 1301.	3.3	20
59	Pulse chirping and ionization of O_2 molecules for the filamentation of femtosecond laser pulses in air. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 874.	2.1	24
60	Self-compression by femtosecond pulse filamentation: Experiments versus numerical simulations. Physical Review E, 2006, 74, 056604.	2.1	144
61	UVâ€“Supercontinuum generated by femtosecond pulse filamentation in air: Meter-range experiments versus numerical simulations. Applied Physics B: Lasers and Optics, 2006, 82, 341-345.	2.2	29
62	Self-guiding of femtosecond light pulses in condensed media: Plasma generation versus chromatic dispersion. Physica D: Nonlinear Phenomena, 2006, 220, 14-30.	2.8	69
63	Atmospheric propagation of gradient-shaped and spinning femtosecond light pulses. Physica D: Nonlinear Phenomena, 2006, 223, 163-173.	2.8	25
64	Multifilamentation transmission through fog. Physical Review E, 2005, 72, 026611.	2.1	85
65	Self-channeling of ultrashort laser pulses in materials with anomalous dispersion. Physical Review E, 2005, 71, 065601.	2.1	61
66	Chirp-induced dynamics of femtosecond filaments in air. Optics Letters, 2005, 30, 917.	3.3	68
67	Supercontinuum emission and enhanced self-guiding of infrared femtosecond filaments sustained by third-harmonic generation in air. Physical Review E, 2005, 71, 016602.	2.1	80
68	Femtosecond Optical Vortices in Air. Physical Review Letters, 2005, 95, 193901.	7.8	105
69	Filamentation of femtosecond light pulses in the air: Turbulent cells versus long-range clusters. Physical Review E, 2004, 70, 046602.	2.1	102
70	Boosted propagation of femtosecond filaments in air by double-pulse combination. Physical Review E, 2004, 69, 065601.	2.1	10
71	Multiple Filamentation of Terawatt Laser Pulses in Air. Physical Review Letters, 2004, 92, 225002.	7.8	178
72	Filamentation patterns in Kerr media vs. beam shape robustness, nonlinear saturation and polarization states. Physica D: Nonlinear Phenomena, 2003, 176, 181-211.	2.8	74

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73	Temporal Shaping of Femtosecond Solitary Pulses in Photoionized Media. Physical Review Letters, 2003, 90, 053901.	7.8	53
74	Femtosecond pulse compression in pressure-gas cells filled with argon. Physical Review E, 2003, 68, 066603.	2.1	53
75	Hyperbolic Shock Waves of the Optical Self-Focusing with Normal Group-Velocity Dispersion. Physical Review Letters, 2002, 89, 153902.	7.8	28
76	Infrared femtosecond light filaments in air: simulations and experiments. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 1117.	2.1	129
77	Light Filaments in Air for Ultraviolet and Infrared Wavelengths. Physical Review Letters, 2002, 88, 135003.	7.8	102
78	Collapsing dynamics of attractive Boseâ€“Einstein condensates. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 304, 136-142.	2.1	16
79	Self-Guided Propagation of Ultrashort IR Laser Pulses in Fused Silica. Physical Review Letters, 2001, 87, 213902.	7.8	238
80	Gas-Induced Solitons. Physical Review Letters, 2001, 86, 1003-1006.	7.8	77
81	Breakup and Fusion of Self-Guided Femtosecond Light Pulses in Air. Physical Review Letters, 2001, 86, 5470-5473.	7.8	197
82	Splittings, coalescence, bunch and snake patterns in the 3D nonlinear SchrÃ¶dinger equation with anisotropic dispersion. Physica D: Nonlinear Phenomena, 2001, 151, 175-198.	2.8	26
83	Influence of Four-Wave Mixing and Walk-Off on the Self-Focusing of Coupled Waves. Physical Review Letters, 2000, 84, 3302-3305.	7.8	9
84	Soliton stability versus collapse. Physical Review E, 2000, 62, R3071-R3074.	2.1	40
85	Self-guiding light in layered nonlinear media. Optics Letters, 2000, 25, 1037.	3.3	100
86	Modeling the filamentation of ultra-short pulses in ionizing media. Physics of Plasmas, 2000, 7, 193-209.	1.9	75
87	Nonlinear propagation of self-guided ultra-short pulses in ionized gases. Physics of Plasmas, 2000, 7, 210-230.	1.9	92
88	Fusion, collapse, and stationary bound states of incoherently coupled waves in bulk cubic media. Physical Review E, 1999, 59, 4600-4613.	2.1	16
89	Two-beam interaction in saturable media. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 246, 423-428.	2.1	17
90	Wave collapse in bulk media with quadratic and cubic responses. Optics Communications, 1998, 146, 231-235.	2.1	11

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91	Wave collapse in physics: principles and applications to light and plasma waves. Physics Reports, 1998, 303, 259-370.	25.6	686
92	Coalescence and instability of copropagating nonlinear waves. Physical Review E, 1998, 58, 6606-6625.	2.1	23
93	Self-focusing and solitonlike structures in materials with competing quadratic and cubic nonlinearities. Physical Review E, 1997, 55, 3555-3570.	2.1	65
94	Self-focusing dynamics of nonlinear waves in media with parabolic-type inhomogeneities. Physics of Plasmas, 1997, 4, 1227-1237.	1.9	32
95	A perturbative analysis of the time-envelope approximation in strong Langmuir turbulence. Physica D: Nonlinear Phenomena, 1996, 95, 351-379.	2.8	27
96	Multisplitting and collapse of selfâ€focusing anisotropic beams in normal/anomalous dispersive media. Physics of Plasmas, 1996, 3, 824-843.	1.9	44
97	Pulse splitting of self-focusing beams in normally dispersive media. Physical Review A, 1996, 53, 4476-4480.	2.5	12
98	Defocusing regimes of nonlinear waves in media with negative dispersion. Physical Review E, 1996, 53, R1340-R1343.	2.1	22
99	Formation of stable solitons in quadratic nonlinear media. Physical Review A, 1995, 52, R28-R31.	2.5	63
100	Collapse of Chern-Simonsâ€“Gauged Matter Fields. Physical Review Letters, 1995, 74, 3907-3911.	7.8	13
101	Blowing up time-dependent solutions of the planar, Chern-Simons gauged nonlinear Schrodinger equation. Nonlinearity, 1995, 8, 235-253.	1.4	66
102	Non-self-similar inertial regimes of the scalar supersonic Langmuir collapse. Physica D: Nonlinear Phenomena, 1994, 72, 87-94.	2.8	4
103	Transient regimes of anisotropic light beam self-focusing in nonlinear dispersive media. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 189, 290-298.	2.1	16
104	Dynamical stability analysis of strong/weak wave collapses. Journal of Mathematical Physics, 1994, 35, 5765-5780.	1.1	4
105	Non-self-similar collapsing solutions of the nonlinear SchrÃ¶dinger equation at the critical dimension. Physical Review E, 1993, 48, R684-R687.	2.1	15
106	Bounded spatial extension of the self-similar collapsing solutions of the nonlinear SchrÃ¶dinger equation. Physica Scripta, 1993, 47, 323-327.	2.5	6
107	Time dependent solutions of wave collapse. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 166, 116-122.	2.1	17
108	Collapsing solutions of the Zakharov equations with anisotropic contraction rates. Physica D: Nonlinear Phenomena, 1991, 52, 59-62.	2.8	2

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109	Self-similar regimes of anisotropic collapses. Laser and Particle Beams, 1991, 9, 371-379.	1.0	1
110	Self-similar Langmuir collapse at critical dimension. Laser and Particle Beams, 1991, 9, 363-370.	1.0	1
111	Strong Langmuir turbulence and second harmonic spectra in a 1 Î¼m laserâ€produced plasma. Physics of Fluids B, 1990, 2, 160-165.	1.7	14
112	Scalar wave collapse at critical dimension. Physical Review A, 1990, 42, 4952-4961.	2.5	10
113	Langmuir wave collapse with anisotropic contraction rates. Physical Review A, 1990, 42, 4962-4971.	2.5	5
114	Numerical simulation of the X-ray energetics in spherical plasmas. Laser and Particle Beams, 1988, 6, 343-351.	1.0	1
115	Measurements of magnetic fields using the Zeeman effect in laserâ€produced plasmas. Physics of Fluids, 1987, 30, 2893-2897.	1.4	13