Aurelien Houard

List of Publications by Year
in descending order

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135	3,656	126907	138484
papers	citations	33 h-index	58 g-index

135	135	135	1525
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Conical Forward THz Emission from Femtosecond-Laser-Beam Filamentation in Air. Physical Review Letters, 2007, 98, 235002.	7.8	444
2	Strong Enhancement of Terahertz Radiation from Laser Filaments in Air by a Static Electric Field. Physical Review Letters, 2008, 100, 255006.	7.8	219
3	Forward THz radiation emission by femtosecond filamentation in gases: theory and experiment. New Journal of Physics, 2008, 10, 013015.	2.9	178
4	Kilometer range filamentation. Optics Express, 2013, 21, 26836.	3.4	148
5	Recollision-Induced Superradiance of Ionized Nitrogen Molecules. Physical Review Letters, 2015, 115, 133203.	7.8	131
6	Terahertz Radiation Source in Air Based on Bifilamentation of Femtosecond Laser Pulses. Physical Review Letters, 2007, 99, 135002.	7.8	118
7	Self-Guided Propagation of Ultrashort Laser Pulses in the Anomalous Dispersion Region of Transparent Solids: A New Regime of Filamentation. Physical Review Letters, 2013, 110, 115003.	7.8	116
8	Self-seeded lasing in ionized air pumped by 800 nm femtosecond laser pulses. Optics Express, 2013, 21, 22791.	3.4	115
9	Backward stimulated radiation from filaments in nitrogen gas and air pumped by circularly polarized 800 nm femtosecond laser pulses. Optics Express, 2014, 22, 12750.	3.4	112
10	Plasma Luminescence from Femtosecond Filaments in Air: Evidence for Impact Excitation with Circularly Polarized Light Pulses. Physical Review Letters, 2015, 114, 063003.	7.8	83
11	Superfilamentation in Air. Physical Review Letters, 2014, 112, 223902.	7.8	80
12	Energy Exchange between Femtosecond Laser Filaments in Air. Physical Review Letters, 2010, 105, 055003.	7.8	71
13	Triggering, guiding and deviation of long air spark discharges with femtosecond laser filament. AIP Advances, 2012, 2, .	1.3	60
14	Backward Lasing of Air plasma pumped by Circularly polarized femtosecond pulses for the saKe of remote sensing (BLACK). Optics Express, 2014, 22, 29964.	3.4	59
15	Blueshifted continuum peaks from filamentation in the anomalous dispersion regime. Physical Review A, 2013, 87, .	2.5	57
16	Radiofrequency plasma antenna generated by femtosecond laser filaments in air. Applied Physics Letters, 2012, 101, .	3.3	56
17	Lasing of ambient air with microjoule pulse energy pumped by a multi-terawatt infrared femtosecond laser. Optics Letters, 2014, 39, 1725.	3.3	56
18	Efficient generation of third harmonic radiation in air filaments: A revisit. Optics Communications, 2011, 284, 4706-4713.	2.1	55

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19	Lasing without population inversion in N2+. APL Photonics, 2019, 4, .	5.7	55
20	Coherent and incoherent radial THz radiation emission from femtosecond filaments in air. Optics Express, 2007, 15, 15274.	3.4	54
21	Femtosecond filamentation in turbulent air. Physical Review A, 2008, 78, .	2.5	53
22	Revival of femtosecond laser plasma filaments in air by a nanosecond laser. Optics Express, 2009, 17, 11450.	3.4	51
23	Generation of long-lived underdense channels using femtosecond filamentation in air. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 094009.	1.5	51
24	Polarization analysis of terahertz radiation generated by four-wave mixing in air. Optics Letters, 2008, 33, 1195.	3.3	49
25	Unexpected Sensitivity of Nitrogen Ions Superradiant Emission on Pump Laser Wavelength and Duration. Physical Review Letters, 2017, 119, 203205.	7.8	47
26	Study of filamentation with a high power high repetition rate ps laser at 103 Âµm. Optics Express, 2016, 24, 7437.	3.4	46
27	Gating attosecond pulses in a noncollinear geometry. Optica, 2015, 2, 563.	9.3	45
28	Coherent synthesis of terahertz radiation from femtosecond laser filaments in air. Applied Physics Letters, 2013, 102, 221107.	3.3	43
29	Whole life cycle of femtosecond ultraviolet filaments in water. Physical Review A, 2014, 89, .	2.5	43
30	High current permanent discharges in air induced by femtosecond laser filamentation. Applied Physics Letters, 2007, 90, 171501.	3.3	39
31	Energy deposition from focused terawatt laser pulses in air undergoing multifilamentation. Optics Express, 2016, 24, 6271.	3.4	39
32	Re-evaluation of the peak intensity inside a femtosecond laser filament in air. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 094003.	1.5	37
33	Amplification of transition-Cherenkov terahertz radiation of femtosecond filament in air. Applied Physics Letters, 2008, 93, 051108.	3.3	36
34	Maker fringes in the Terahertz radiation produced by a 2-color laser field in air. Optics Express, 2009, 17, 11480.	3.4	33
35	Radiofrequency conical emission from femtosecond filaments in air. Applied Physics Letters, 2010, 96, 141111.	3.3	32
36	Laser-induced periodic annular surface structures on fused silica surface. Applied Physics Letters, 2013, 102, 251103.	3.3	31

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37	Lasing dynamics of neutral nitrogen molecules in femtosecond filaments. Physical Review A, 2016, 94, .	2.5	28
38	Underwater acoustic wave generation by filamentation of terawatt ultrashort laser pulses. Physical Review E, 2016, 93, 063106.	2.1	27
39	Energy-scalable temporal cleaning device for femtosecond laser pulses based on cross-polarized wave generation. Review of Scientific Instruments, 2013, 84, 043106.	1.3	26
40	Underwater acoustic signals induced by intense ultrashort laser pulse. Journal of the Acoustical Society of America, 2015, 137, EL288-EL292.	1.1	26
41	The laser lightning rod project. EPJ Applied Physics, 2021, 93, 10504.	0.7	26
42	Experimental observation of a traveling plasma grating formed by two crossing filaments in gases. Applied Physics Letters, 2011, 98, 121110.	3.3	25
43	Measurement and Control of Plasma Oscillations in Femtosecond Filaments. Physical Review Letters, 2011, 106, 255002.	7.8	25
44	Effect of input pulse chirp on nonlinear energy deposition and plasma excitation in water. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 2829.	2.1	25
45	Study of filamentation threshold in zinc selenide. Optics Express, 2014, 22, 5852.	3.4	24
46	Ciliary White Light: Optical Aspect of Ultrashort Laser Ablation on Transparent Dielectrics. Physical Review Letters, 2013, 110, 097601.	7.8	23
47	Coherent control of boosted terahertz radiation from air plasma pumped by a femtosecond three-color sawtooth field. Physical Review A, 2020, 102, .	2.5	23
48	A simple high-voltage high current spark gap with subnanosecond jitter triggered by femtosecond laser filamentation. Applied Physics Letters, 2013, 102, 163502.	3.3	22
49	Calorimetric detection of the conical terahertz radiation from femtosecond laser filaments in air. Applied Physics Letters, 2007, 91, .	3.3	19
50	Tesla coil discharges guided by femtosecond laser filaments in air. Applied Physics Letters, 2012, 100, 181112.	3.3	19
51	Two-color interferometer for the study of laser filamentation triggered electric discharges in air. Review of Scientific Instruments, 2014, 85, 123101.	1.3	19
52	Improving supersonic flights with femtosecond laser filamentation. Science Advances, 2018, 4, eaau5239.	10.3	18
53	Study of laser induced plasma grating dynamics in gases. Optics Communications, 2014, 312, 35-42.	2.1	16
54	Formation Dynamics of Excited Neutral Nitrogen Molecules inside Femtosecond Laser Filaments. Physical Review Letters, 2019, 123, 243203.	7.8	16

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55	Dynamics of plasma gratings in atomic and molecular gases. Physical Review E, 2012, 86, 036405.	2.1	15
56	Large scale Tesla coil guided discharges initiated by femtosecond laser filamentation in air. Journal of Applied Physics, 2014, 116, .	2.5	15
57	Postfilament supercontinuum on 100â€‰â€‰m path in air. Optics Letters, 2021, 46, 1125.	3.3	15
58	Fine control of terahertz radiation from filamentation by molecular lensing in air. Optics Letters, 2010, 35, 1710.	3.3	13
59	Compact 180-kV Marx generator triggered in atmospheric air by femtosecond laser filaments. Applied Physics Letters, 2014, 104, .	3.3	13
60	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
61	Cumulative air density depletion during high repetition rate filamentation of femtosecond laser pulses: Application to electric discharge triggering. Applied Physics Letters, 2021, 119, .	3.3	13
62	Compression of high-energy ultrashort laser pulses through an argon-filled tapered planar waveguide. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1009.	2.1	12
63	Recent developments in femtosecond filamentation. Journal of Physics: Conference Series, 2014, 497, 012001.	0.4	11
64	Laser beam self-symmetrization in air in the multifilamentation regime. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 094013.	1.5	10
65	Backward lasing of singly ionized nitrogen ions pumped by femtosecond laser pulses. Applied Physics B: Lasers and Optics, 2020, 126, 1.	2.2	10
66	Theory of femtosecond strong field ion excitation and subsequent lasing in N2+. New Journal of Physics, 2021, 23, 023035.	2.9	10
67	Effect of an external electric field on the coherent terahertz emission from multiple filaments in air. Applied Physics B: Lasers and Optics, 2014, 117, 265-269.	2.2	9
68	Coherent interaction between the terahertz radiation emitted by filaments in air. Laser Physics, 2014, 24, 094009.	1.2	9
69	Prolongation of the lifetime of guided discharges triggered in atmospheric air by femtosecond laser filaments up to 130â€‰Î¼s. Applied Physics Letters, 2016, 108, .	3.3	9
70	Nonadiabaticity of cavity-free neutral nitrogen lasing. Physical Review A, 2017, 96, .	2.5	9
71	Quantum erasing of laser emission in N2+. Optics Letters, 2020, 45, 4670.	3.3	9
72	Dipolar-like antenna emission in the radiofrequency range by laser-produced plasma channels in air. Journal Physics D: Applied Physics, 2008, 41, 245206.	2.8	8

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73	Transfer of microwave energy along a filament plasma column in air. Applied Physics B: Lasers and Optics, 2017, 123, 1.	2.2	8
74	Long-lived laser-induced arc discharges for energy channeling applications. Scientific Reports, 2017, 7, 13801.	3.3	8
75	Optical transmission during mid-infrared femtosecond laser pulses ablation of fused silica. Applied Surface Science, 2019, 471, 506-515.	6.1	8
76	Spatiotemporal cleaning of a femtosecond laser pulse through interaction with counterpropagating filaments in air. Physical Review A, 2014, 89, .	2.5	7
77	Excitation of nitrogen molecular ions in a strong laser field by electron recollisions. European Physical Journal D, 2017, 71, 1.	1.3	7
78	Terahertz Radiation from a Longitudinal Electric Field Biased Femtosecond Filament in Air*. Chinese Physics Letters, 2020, 37, 065201.	3.3	7
79	Modeling of the processes of ionization and excitation of nitrogen molecules by short and intense laser pulses. Physical Review A, 2021, 104, .	2.5	7
80	HV discharges triggered by dual- and triple-frequency laser filaments. Optics Express, 2019, 27, 11339.	3.4	6
81	Control of the acoustic waves generated by intense laser filamentation in water. Optics Express, 2022, 30, 9103.	3.4	6
82	Compression of TW class laser pulses in a planar hollow waveguide for applications in strong-field physics. European Physical Journal D, 2014, 68, 1.	1.3	5
83	Plasma dynamics of a laser filamentation-guided spark. Physics of Plasmas, 2016, 23, 093505.	1.9	5
84	Long plasma channels formed by axicon-focused filaments. Proceedings of SPIE, 2008, , .	0.8	4
85	Filamentation and Pulse Self-compression in the Anomalous Dispersion Region of Glasses. , 2016, , 147-165.		3
86	Experimental Investigation of Linear Energy Deposition Using Femtosecond Laser Filamentation in a M=3 Supersonic Flow.. , 2018, , .		3
87	Tracing Evolution of Angle-Wavelength Spectrum along the 40-m Postfilament in Corridor Air. Photonics, 2021, 8, 446.	2.0	3
88	Coherently controlled ionization of gases by three-color femtosecond laser pulses. Physical Review A, 2022, 105, .	2.5	3
89	Kilometer range filamentation: effects of filaments on transparent and non-transparent materials at long distances. , 2011, , .		2
90	Lasing from plasma filaments in Air. , 2015, , .		2

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91	Cerenkov THz emission from femtosecond filamentation in air. , 2007, , .		1
92	Polarization analysis of THz generated by four wave mixing in air. , 2008, , .		1
93	Triggering, guiding and deviation of long spark discharges with femtosecond laser filament. , 2011, , .		1
94	Femtosecond laser-induced pulsed ultrasound source in water. , 2013, , .		1
95	Propagation of intense femtosecond laser pulse in water and acoustic waves generation. , 2014, , .		1
96	Time-resolved study of laser emission in nitrogen gas pumped by two near IR femtosecond laser pulses. Optics Letters, 2021, 46, 1253.	3.3	1
97	Acoustic wave generation by multifilamentation in water. , 2016, , .		1
98	Plasma column from laser filamentation in air as a virtual radio-frequency antenna. , 2013, , .		1
99	Laser without population inversion of nitrogen ions pumped by femtosecond pulses. , 2019, , .		1
100	Optimizing the third harmonic generated from air plasma filaments pumped by femtosecond laser pulses. Journal of the Optical Society of America B: Optical Physics, 2019, 36, G13.	2.1	1
101	High current permanent discharges in air induced by femtosecond laser filamentation. , 2007, , .		0
102	Terahertz radiation from biased femtosecond laser filament in air. , 2008, , .		0
103	Generation of long plasma channels in air by using axicon-generated bessel beams. , 2008, , .		0
104	Long Time Revival of femtosecond laser plasma filaments in air. , 2009, , .		0
105	Coherent control of an electric dipole in air plasma created by femtosecond laser pulses. , 2009, , .		0
106	Long time revival of femtosecond laser plasma filaments in air. , 2009, , .		0
107	Damage effects of filaments on non-transparent materials at long distances. , 2011, , .		0
108	Efficient third harmonic generation by two crossing filaments. , 2011, , .		0

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109	Energy exchange between two filaments in air via a traveling plasma grating. , 2011, , .		0
110	Spatio-temporal cleaning of a femtosecond laser pulse by a filament conjugate mirror. , 2013, , .		0
111	Dynamics of third harmonic yield from a femtosecond laser filament in air. , 2013, , .		0
112	Directionality control of the THz radiation from two filaments. , 2013, , .		0
113	Guiding of meter scale AC discharges by laser filamentation in air. , 2013, , .		0
114	Plasma column from laser filamentation in air as a virtual radio-frequency antenna. , 2013, , .		0
115	Ciliary white light generated during femtosecond laser ablation on transparent dielectrics. , 2013, , .		0
116	Nonlinear energy deposition in water from fs-laser pulses: effect of the input chirp. , 2014, , .		0
117	Two-color interferometry for the study of laser filamentation triggered discharges in air. , 2015, , .		0
118	Evolution of a laser filamentation triggered electric discharge in air. , 2015, , .		0
119	Optical Aspect of Ultrafast Laser Ablation on Transparent Dielectrics: Ciliary White Light. , 2015, , .		0
120	Cavitation dynamics induced by laser superfilaments in water. , 2017, , .		0
121	The Role of Electron Collisions in Lasing in Neutral and Singly Ionized Molecular Nitrogen. Springer Series in Optical Sciences, 2018, , 45-74.	0.7	0
122	Resonance-Enhanced Harmonics From Air Plasma In The Perturbative Regime. , 2018, , .		0
123	Laser lightning rod and artificial fog dissipation. , 2021, , .		0
124	Intense Terahertz emission from biased femtosecond laser filament in air. , 2008, , .		0
125	Determination of electron diffusion coefficients in atomic and molecular gases using femtosecond pulses. , 2011, , .		0
126	Spontaneous currents inside air filaments. , 2011, , .		0

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127	Influence of the anomalous dispersion on the supercontinuum generation by femtosecond laser filamentation. , 2013, , .		0
128	Guiding of meter scale AC discharges by laser filamentation in air. , 2013, , .		0
129	Third Harmonic Generation from Perturbed Femtosecond Filaments in Air. Springer Series in Chemical Physics, 2014, , 77-93.	0.2	0
130	Study of Filamentation Threshold in Zinc Selenide. , 2014, , .		0
131	Study of the interaction between multiple filaments in air. , 2014, , .		0
132	Backward Lasing of Femtosecond Plasma Filaments. Springer Series in Chemical Physics, 2015, , 89-103.	0.2	0
133	Superradiance of Air Plasma Induced by Electron Recollision. , 2016, , .		0
134	Utilisation dâ€™une source laser pulsÃ©e Ã haute energie comme source acoustique large bande en milieu liquide. Traitement Du Signal, 2016, 33, 95-111.	1.3	0
135	Coherent control of boosted Terahertz radiation from air plasma pumped by femtosecond 3-color sawtooth field. , 2020, , .		0