Christoph P Hauri

List of Publications by Year
in descending order

112	5,247	117625	82547
papers	citations	34 h-index	72 g-index

113	113	113	4257
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generation of intense, carrier-envelope phase-locked few-cycle laser pulses through filamentation. Applied Physics B: Lasers and Optics, 2004, 79, 673-677.	2.2	581
2	Scaling strong-field interactions towards the classical limit. Nature Physics, 2008, 4, 386-389.	16.7	361
3	Generation of 09-mJ THz pulses in DSTMS pumped by a Cr:Mg_2SiO_4 laser. Optics Letters, 2014, 39, 6632.	3.3	272
4	SwissFEL: The Swiss X-ray Free Electron Laser. Applied Sciences (Switzerland), 2017, 7, 720.	2.5	272
5	Large-Amplitude Spin Dynamics Driven by a THz Pulse in Resonance with an Electromagnon. Science, 2014, 343, 1333-1336.	12.6	255
6	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>GV</mml:mi><mml:mo>/</mml:mo><mml:mi mathvariant="normal">m</mml:mi></mml:mrow></mml:math>Single-Cycle Terahertz Fields from a Laser-Driven Large-Size Partitioned Organic Crystal. Physical Review Letters, 2014, 112, .	7.8	244
7	Demonstration of a low-frequency three-dimensional terahertz bullet with extreme brightness. Nature Communications, 2015, 6, 5976.	12.8	229
8	High efficiency THz generation in DSTMS, DAST and OH1 pumped by Cr:forsterite laser. Optics Express, 2015, 23, 4573.	3.4	199
9	Strong-field single-cycle THz pulses generated in an organic crystal. Applied Physics Letters, 2011, 99, .	3.3	183
10	Off-resonant magnetization dynamics phase-locked to an intense phase-stable terahertz transient. Nature Photonics, 2013, 7, 720-723.	31.4	169
11	Self-compression of ultra-short laser pulses down to one optical cycle by filamentation. Journal of Modern Optics, 2006, 53, 75-85.	1.3	154
12	A compact and cost-effective hard X-ray free-electron laser driven by a high-brightness and low-energy electron beam. Nature Photonics, 2020, 14, 748-754.	31.4	140
13	Intense self-compressed, self-phase-stabilized few-cycle pulses at 2 Î¼m from an optical filament. Optics Letters, 2007, 32, 868.	3.3	120
14	Sub-femtosecond precision measurement of relative X-ray arrival time for free-electron lasers. Nature Photonics, 2014, 8, 706-709.	31.4	105
15	Generation of intense few-cycle laser pulses through filamentation - parameter dependence. Optics Express, 2005, 13, 7541.	3.4	95
16	Scaling submillimeter single-cycle transients toward megavolts per centimeter field strength via optical rectification in the organic crystal OH1. Optics Letters, 2012, 37, 899.	3.3	83
17	Spatiotemporal Focusing Dynamics of Intense Supercontinuum THz Pulses. Physical Review Letters, 2013, 110, 123902.	7.8	82
18	Recent progress in acentric core structures for highly efficient nonlinear optical crystals and their supramolecular interactions and terahertz applications. CrystEngComm, 2016, 18, 7180-7203.	2.6	76

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19	Phase-preserving chirped-pulse optical parametric amplification to 173 fs directly from a Ti:sapphire oscillator. Optics Letters, 2004, 29, 1369.	3.3	72
20	Intrinsic Emittance Reduction of an Electron Beam from Metal Photocathodes. Physical Review Letters, 2010, 104, 234802.	7.8	61
21	Ultra-broadband chirped-pulse optical parametric amplifier with angularly dispersed beams. Optics Express, 2004, 12, 518.	3.4	60
22	High-energy terahertz pulses from organic crystals: DAST and DSTMS pumped at Ti:sapphire wavelength. Optics Letters, 2013, 38, 5106.	3.3	55
23	Intense THz source based on BNA organic crystal pumped at Ti:sapphire wavelength. Optics Letters, 2016, 41, 1777.	3.3	54
24	Intense, carrier frequency and bandwidth tunable quasi single-cycle pulses from an organic emitter covering the Terahertz frequency gap. Scientific Reports, 2015, 5, 14394.	3.3	53
25	Leggett mode controlled by light pulses. Nature Physics, 2019, 15, 341-346.	16.7	51
26	Subcycle Extreme Nonlinearities in GaP Induced by an Ultrastrong Terahertz Field. Physical Review Letters, 2017, 118, 083901.	7.8	50
27	Enhanced VUV-assisted high harmonic generation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S275-S281.	1.5	48
28	Comparison of Thermal Detector Arrays for Off-Axis THz Holography and Real-Time THz Imaging. Sensors, 2016, 16, 221.	3.8	43
29	Control of high-order harmonic emission using attosecond pulse trains. Journal of Modern Optics, 2006, 53, 87-96.	1.3	41
30	Pump pulse width and temperature effects in lithium niobate for efficient THz generation. Optics Letters, 2013, 38, 5373.	3.3	41
31	Ultrabroadband TW-class Ti:sapphire laser system with adjustable central wavelength, bandwidth and multi-color operation. Optics Express, 2011, 19, 20128.	3.4	40
32	High-precision x-ray FEL pulse arrival time measurements at SACLA by a THz streak camera with Xe clusters. Optics Express, 2014, 22, 30004.	3.4	40
33	Low frequency terahertz-induced demagnetization in ferromagnetic nickel. Applied Physics Letters, 2016, 108, 182903.	3.3	39
34	Highâ€Efficiency and Low Distortion Photoacoustic Effect in 3D Graphene Sponge. Advanced Functional Materials, 2018, 28, 1702652.	14.9	35
35	High field broadband THz generation in organic materials. Journal of Modern Optics, 2015, 62, 1480-1485.	1.3	34
36	Optimization of the wave front of high order harmonics. European Physical Journal D, 2008, 48, 459-463.	1.3	32

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37	Validity of wave-front reconstruction and propagation of ultrabroadband pulses measured with a Hartmannâ€“Shack sensor. Optics Letters, 2005, 30, 1563.	3.3	31
38	High-performing nonlinear visualization of terahertz radiation on a silicon charge-coupled device. Nature Communications, 2015, 6, 8439.	12.8	31
39	Terahertz magnetic modulator based on magnetically clustered nanoparticles. Applied Physics Letters, 2014, 105, .	3.3	29
40	SwissFEL Aramis beamline photon diagnostics. Journal of Synchrotron Radiation, 2018, 25, 1238-1248.	2.4	29
41	Generation of high-fidelity, down-chirped sub-10fsmJ pulses through filamentation for driving relativistic laser-matter interactions at 1kHz. Applied Physics Letters, 2006, 89, 151125.	3.3	28
42	High-power femtosecond Raman frequency shifter. Optics Letters, 2016, 41, 4719.	3.3	27
43	Self-referenced spectral interferometry for ultrashort infrared pulse characterization. Optics Letters, 2012, 37, 2892.	3.3	26
44	Extreme nonlinear terahertz electro-optics in diamond for ultrafast pulse switching. APL Photonics, 2017, 2, .	5.7	26
45	Coherent and incoherent ultrafast magnetization dynamics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:math> ferromagnets driven by extreme terahertz fields. Physical Review B, 2018, 98, .	3.2	26
46	Quantum efficiency of technical metal photocathodes under laser irradiation of various wavelengths. Applied Physics A: Materials Science and Processing, 2013, 112, 647-661.	2.3	25
47	Simultaneous electronic and the magnetic excitation of a ferromagnet by intense THz pulses. New Journal of Physics, 2016, 18, 013019.	2.9	24
48	Air nonlinear dynamics initiated by ultra-intense lambda-cubic terahertz pulses. Applied Physics Letters, 2015, 106, 181108.	3.3	23
49	THz streak camera method for synchronous arrival time measurement of two-color hard X-ray FEL pulses. Optics Express, 2017, 25, 2080.	3.4	23
50	Intrinsic emittance reduction of copper cathodes by laser wavelength tuning in an rf photoinjector. Physical Review Special Topics: Accelerators and Beams, 2015, 18, .	1.8	23
51	Control and characterization of multiple circularly polarized femtosecond filaments in argon. Optics Letters, 2007, 32, 1650.	3.3	21
52	High-order harmonic wave fronts generated with controlled astigmatic infrared laser. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B161.	2.1	21
53	Demonstration of a spatial filtering amplifier for high-order harmonics. Optics Letters, 2007, 32, 1498.	3.3	20
54	Two-dimensional organization of a large number of stationary optical filaments by adaptive wave front control. Applied Physics B: Lasers and Optics, 2008, 90, 391-394.	2.2	20

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55	Generation of frequency-tunable pulsed terahertz radiation by a Cr:forsterite laser system with an acoustooptical control of the pulse temporal profile. Quantum Electronics, 2016, 46, 1149-1153.	1.0	20
56	Experimental station Bernina at SwissFEL: condensed matter physics on femtosecond time scales investigated by X-ray diffraction and spectroscopic methods. Journal of Synchrotron Radiation, 2019, 26, 874-886.	2.4	19
57	Spectral reshaping and pulse compression via sequential filamentation in gases. Optics Express, 2008, 16, 390.	3.4	18
58	Generation of 148-fs pulses in a spatially dispersed amplifier. Optics Letters, 2004, 29, 201.	3.3	17
59	Generation of broadband THz pulses in organic crystal OH1 at room temperature and 10 K. Optical Materials Express, 2014, 4, 870.	3.0	17
60	Design of a sub-13-fs, multi-gigawatt chirped pulse optical parametric amplification system. Applied Physics B: Lasers and Optics, 2004, 79, 285-288.	2.2	15
61	Coherent manipulation of free amino acids fluorescence. Physical Chemistry Chemical Physics, 2012, 14, 9317.	2.8	15
62	Spectrally intense terahertz source based on triangular Selenium. Scientific Reports, 2015, 5, 8059.	3.3	15
63	Can Energetic Terahertz Pulses Initiate Surface Catalytic Reactions on the Picosecond Time Scale?. Chimia, 2011, 65, 323.	0.6	14
64	Vacuum breakdown limit and quantum efficiency obtained for various technical metals using dc and pulsed voltage sources. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1191-1202.	2.1	12
65	A scheme for a shot-to-shot, femtosecond-resolved pulse length and arrival time measurement of free electron laser x-ray pulses that overcomes the time jitter problem between the FEL and the laser. Journal of Instrumentation, 2014, 9, P03006-P03006.	1.2	12
66	Timing jitter studies of the SwissFEL Test Injector drive laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 735, 471-479.	1.6	12
67	Femtosecond resolution timing jitter correction on a TW scale Ti:sapphire laser system for FEL pump-probe experiments. Optics Express, 2015, 23, 29929.	3.4	11
68	Opportunities for Chemistry at the SwissFEL X-ray Free Electron Laser. Chimia, 2017, 71, 299.	0.6	11
69	Single-shot dynamics of pulses from a gas-filled hollow fiber. Applied Physics B: Lasers and Optics, 2004, 79, 1033-1039.	2.2	10
70	The SwissFEL Experimental Laser facility. Journal of Synchrotron Radiation, 2016, 23, 1143-1150.	2.4	10
71	All-reflective high fringe contrast autocorrelator for measurement of ultrabroadband optical pulses. Optics Letters, 2006, 31, 3514.	3.3	9
72	Aberration-free high-harmonic source generated with a two-colour field. Europhysics Letters, 2010, 89, 24001.	2.0	9

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73	Electron beam characterization of a combined diode rf electron gun. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	8
74	Direct shaping of picosecond high energy deep ultraviolet pulses. Applied Physics B: Lasers and Optics, 2011, 105, 255-261.	2.2	8
75	Deep-ultraviolet picosecond flat-top pulses by chirp-matched sum frequency generation. Optics Letters, 2012, 37, 1619.	3.3	7
76	Design of efficient single-stage chirped pulse difference frequency generation at 7ÂĨ¼m, driven by a dual wavelength Ti:sapphire laser. Applied Physics B: Lasers and Optics, 2014, 117, 379-387.	2.2	7
77	Temporal and spectral shaping of broadband terahertz pulses in a photoexcited semiconductor. Applied Physics Letters, 2015, 106, 051110.	3.3	7
78	Short X-ray pulses from third-generation lightÂsources. Journal of Synchrotron Radiation, 2016, 23, 141-151.	2.4	7
79	Laser-driven generation of intense single-cycle THz field. Proceedings of SPIE, 2012, , .	0.8	5
80	Intense sub-two-cycle infrared pulse generation via phase-mismatched cascaded nonlinear interaction in DAST crystal. Optics Letters, 2014, 39, 2660.	3.3	5
81	Deformable mirror for wavefront shaping of infrared radiation. Optics Letters, 2018, 43, 2062.	3.3	4
82	Micromachining of hardened Portland cement pastes using femtosecond laser pulses. Materials and Structures/Materiaux Et Constructions, 2007, 40, 641-650.	3.1	3
83	Large Charge Extraction from Metallic MultifilamentaryNb3SnPhotocathode. Physical Review Letters, 2012, 108, 194801.	7.8	3
84	Tailoring single-cycle electromagnetic pulses in the 2â€“9 THz frequency range using DAST/SiO_2 multilayer structures pumped at Ti:sapphire wavelength. Optics Express, 2014, 22, 21618.	3.4	3
85	Characterisation, wavefront reconstruction, and propagation of ultra-broadband laser pulses from Hartmann-Shack measurements. , 2005, , .		2
86	Towards High-power Single-cycle THz Laser for Initiating High-field-sensitive Phenomena. Chimia, 2011, 65, 320.	0.6	2
87	Multi-octave Acousto-Optic Spectrum Analyzer for Mid-Infrared Pulsed Sources. , 2014, , .		2
88	Terahertz emission in organic crystals pumped by conventional laser wavelength. Proceedings of SPIE, 2014, , .	0.8	2
89	Single-silicon CCD-CMOS platform for multi-spectral detection from terahertz to x-rays. Optics Letters, 2017, 42, 4596.	3.3	2
90	Laser arrival measurement tools for SwissFEL. Proceedings of SPIE, 2015, , .	0.8	1

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91	Optimized supercontinuum generation and pulse self-compression in filaments from the UV to the IR. , 2008, , .		1
92	Frequency-sheared, time-delayed extreme-ultraviolet pulses produced by high-harmonic generation in argon. Optics Letters, 2005, 30, 1731.	3.3	0
93	Dispersion-Free Interferometric Autocorrelator for Measurement of Ul tra-Broadband Pulses. , 2006, , .		0
94	Two-color chirped pulse amplification with AOPGCF for self-stabilized mid-infrared radiation generation. , 2009, , .		0
95	Efficient chirped-matched third harmonic generation of long UV pulses. , 2009, , .		0
96	Chirped pulses sum frequency generation for deep-Ã‚ÅUV picosecond pulse shaping. , 2012, , .		0
97	Highly efficient generation of single-cycle MV/cm THz pulses in organic crystals. , 2012, , .		0
98	Towards GV/m and multiple tesla fields in the THz Gap from organic crystals. , 2014, , .		0
99	MV/cm Terahertz transients in the THz gap (1-20 THz) from organic crystals. , 2014, , .		0
100	Air nonlinearity triggered by an ultra-intense sub-5 THz light bullet. , 2015, , .		0
101	Terahertz light bullet-induced nonlinearity in a gold thin film. , 2015, , .		0
102	Extreme terahertz brightness by focusing to a lambda-cubic volume. , 2015, , .		0
103	Intense THz source based on BNA organic crystal pumped at conventional Ti:Sapphire wavelength. , 2016, , .		0
104	Gas target for efficient high-harmonic generation. , 2004, , .		0
105	Control of the frequency chirp rate of high harmonic pulses. Springer Series in Chemical Physics, 2005, , 204-206.	0.2	0
106	CEO phase preservation in chirped-pulse optical parametric amplification of 17.3-fs pulses. Springer Series in Chemical Physics, 2005, , 61-63.	0.2	0
107	Polarization state dynamics in femtosecond filaments. , 2008, , .		0
108	High quantum efficiency, low emittance electron beam from multifilamentary cathodes. , 2012, , .		0

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109	Sub-fs precision measurement of relative x-ray arrival time for FELs. , 2014, , .		0
110	Extreme Terahertz brightness by focusing to a lambda-cubic volume. , 2015, , .		0
111	Off-resonant magnetization dynamics in Co, Fe and Ni thin films driven by an intense single-cycle THz field. , 2017, , .		0
112	Intense laser-based THz sources for XFEL experiments. , 2017, , .		0