

Christoph P Hauri

List of Publications by Year in descending order

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docs citations

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times ranked

4257
citing authors

#	ARTICLE	IF	CITATIONS
1	A compact and cost-effective hard X-ray free-electron laser driven by a high-brightness and low-energy electron beam. <i>Nature Photonics</i> , 2020, 14, 748-754.	31.4	140
2	Leggett mode controlled by light pulses. <i>Nature Physics</i> , 2019, 15, 341-346.	16.7	51
3	Experimental station Bernina at SwissFEL: condensed matter physics on femtosecond time scales investigated by X-ray diffraction and spectroscopic methods. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 874-886.	2.4	19
4	Coherent and incoherent ultrafast magnetization dynamics in 3d ferromagnets driven by extreme terahertz fields. <i>Physical Review B</i> , 2018, 98, .	3.2	0
5	Deformable mirror for wavefront shaping of infrared radiation. <i>Optics Letters</i> , 2018, 43, 2062.	3.3	4
6	High Efficiency and Low Distortion Photoacoustic Effect in 3D Graphene Sponge. <i>Advanced Functional Materials</i> , 2018, 28, 1702652.	14.9	35
7	SwissFEL Aramis beamline photon diagnostics. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1238-1248.	2.4	29
8	Subcycle Extreme Nonlinearities in GaP Induced by an Ultrastrong Terahertz Field. <i>Physical Review Letters</i> , 2017, 118, 083901.	7.8	50
9	Opportunities for Chemistry at the SwissFEL X-ray Free Electron Laser. <i>Chimia</i> , 2017, 71, 299.	0.6	11
10	Extreme nonlinear terahertz electro-optics in diamond for ultrafast pulse switching. <i>APL Photonics</i> , 2017, 2, .	5.7	26
11	Single-silicon CCD-CMOS platform for multi-spectral detection from terahertz to x-rays. <i>Optics Letters</i> , 2017, 42, 4596.	3.3	2
12	THz streak camera method for synchronous arrival time measurement of two-color hard X-ray FEL pulses. <i>Optics Express</i> , 2017, 25, 2080.	3.4	23
13	SwissFEL: The Swiss X-ray Free Electron Laser. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 720.	2.5	272
14	Off-resonant magnetization dynamics in Co, Fe and Ni thin films driven by an intense single-cycle THz field. , 2017, , .		0
15	Intense laser-based THz sources for XFEL experiments. , 2017, , .		0
16	Comparison of Thermal Detector Arrays for Off-Axis THz Holography and Real-Time THz Imaging. <i>Sensors</i> , 2016, 16, 221.	3.8	43
17	Simultaneous electronic and the magnetic excitation of a ferromagnet by intense THz pulses. <i>New Journal of Physics</i> , 2016, 18, 013019.	2.9	24
18	Low frequency terahertz-induced demagnetization in ferromagnetic nickel. <i>Applied Physics Letters</i> , 2016, 108, 182903.	3.3	39

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19	Generation of frequency-tunable pulsed terahertz radiation by a Cr:forsterite laser system with an acoustooptical control of the pulse temporal profile. <i>Quantum Electronics</i> , 2016, 46, 1149-1153.	1.0	20
20	Intense THz source based on BNA organic crystal pumped at conventional Ti:Sapphire wavelength. , 2016, , .		0
21	Intense THz source based on BNA organic crystal pumped at Ti:sapphire wavelength. <i>Optics Letters</i> , 2016, 41, 1777.	3.3	54
22	Recent progress in acentric core structures for highly efficient nonlinear optical crystals and their supramolecular interactions and terahertz applications. <i>CrystEngComm</i> , 2016, 18, 7180-7203.	2.6	76
23	The SwissFEL Experimental Laser facility. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1143-1150.	2.4	10
24	Short X-ray pulses from third-generation light sources. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 141-151.	2.4	7
25	High-power femtosecond Raman frequency shifter. <i>Optics Letters</i> , 2016, 41, 4719.	3.3	27
26	Spectrally intense terahertz source based on triangular Selenium. <i>Scientific Reports</i> , 2015, 5, 8059.	3.3	15
27	Intense, carrier frequency and bandwidth tunable quasi single-cycle pulses from an organic emitter covering the Terahertz frequency gap. <i>Scientific Reports</i> , 2015, 5, 14394.	3.3	53
28	Femtosecond resolution timing jitter correction on a TW scale Ti:sapphire laser system for FEL pump-probe experiments. <i>Optics Express</i> , 2015, 23, 29929.	3.4	11
29	Air nonlinear dynamics initiated by ultra-intense lambda-cubic terahertz pulses. <i>Applied Physics Letters</i> , 2015, 106, 181108.	3.3	23
30	Air nonlinearity triggered by an ultra-intense sub-5 THz light bullet. , 2015, , .		0
31	Terahertz light bullet-induced nonlinearity in a gold thin film. , 2015, , .		0
32	Extreme terahertz brightness by focusing to a lambda-cubic volume. , 2015, , .		0
33	Temporal and spectral shaping of broadband terahertz pulses in a photoexcited semiconductor. <i>Applied Physics Letters</i> , 2015, 106, 051110.	3.3	7
34	Demonstration of a low-frequency three-dimensional terahertz bullet with extreme brightness. <i>Nature Communications</i> , 2015, 6, 5976.	12.8	229
35	High field broadband THz generation in organic materials. <i>Journal of Modern Optics</i> , 2015, 62, 1480-1485.	1.3	34
36	High efficiency THz generation in DSTMS, DAST and OH1 pumped by Cr:forsterite laser. <i>Optics Express</i> , 2015, 23, 4573.	3.4	199

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37	Laser arrival measurement tools for SwissFEL. Proceedings of SPIE, 2015, , .	0.8	1
38	High-performing nonlinear visualization of terahertz radiation on a silicon charge-coupled device. Nature Communications, 2015, 6, 8439.	12.8	31
39	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
40	Extreme Terahertz brightness by focusing to a lambda-cubic volume. , 2015, , .		0
41	Sub-femtosecond precision measurement of relative X-ray arrival time for free-electron lasers. Nature Photonics, 2014, 8, 706-709.	31.4	105
42	Towards GV/m and multiple tesla fields in the THz Gap from organic crystals. , 2014, , .		0
43	Multi-octave Acousto-Optic Spectrum Analyzer for Mid-Infrared Pulsed Sources. , 2014, , .		2
44	MV/cm Terahertz transients in the THz gap (1-20 THz) from organic crystals. , 2014, , .		0
45	Intense sub-two-cycle infrared pulse generation via phase-mismatched cascaded nonlinear interaction in DAST crystal. Optics Letters, 2014, 39, 2660.	3.3	5
46	Tailoring single-cycle electromagnetic pulses in the 2-9 THz frequency range using DAST/SiO ₂ multilayer structures pumped at Ti:sapphire wavelength. Optics Express, 2014, 22, 21618.	3.4	3
47	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
48	$m < GV >$ Single-Cycle Terahertz Fields from a Laser-Driven Large-Size Partitioned Organic Crystal. Physical Review Letters, 2014, 112, .	7.8	244
49	Terahertz magnetic modulator based on magnetically clustered nanoparticles. Applied Physics Letters, 2014, 105, .	3.3	29
50	Generation of 09-mJ THz pulses in DSTMS pumped by a Cr:Mg ₂ SiO ₄ laser. Optics Letters, 2014, 39, 6632.	3.3	272
51	Terahertz emission in organic crystals pumped by conventional laser wavelength. Proceedings of SPIE, 2014, , .	0.8	2
52	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
53	Large-Amplitude Spin Dynamics Driven by a THz Pulse in Resonance with an Electromagnon. Science, 2014, 343, 1333-1336.	12.6	255
54	Design of efficient single-stage chirped pulse difference frequency generation at 7.4 μm, driven by a dual wavelength Ti:sapphire laser. Applied Physics B: Lasers and Optics, 2014, 117, 379-387.	2.2	7

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55	Generation of broadband THz pulses in organic crystal OH1 at room temperature and 10 K. Optical Materials Express, 2014, 4, 870.	3.0	17
56	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
57	Sub-fs precision measurement of relative x-ray arrival time for FELs. , 2014, , .		0
58	Off-resonant magnetization dynamics phase-locked to an intense phase-stable terahertz transient. Nature Photonics, 2013, 7, 720-723.	31.4	169
59	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
60	Spatiotemporal Focusing Dynamics of Intense Supercontinuum THz Pulses. Physical Review Letters, 2013, 110, 123902.	7.8	82
61	High-energy terahertz pulses from organic crystals: DAST and DSTMS pumped at Ti:sapphire wavelength. Optics Letters, 2013, 38, 5106.	3.3	55
62	Pump pulse width and temperature effects in lithium niobate for efficient THz generation. Optics Letters, 2013, 38, 5373.	3.3	41
63	Self-referenced spectral interferometry for ultrashort infrared pulse characterization. Optics Letters, 2012, 37, 2892.	3.3	26
64	Large Charge Extraction from Metallic Multifilamentary Nb ₃ Sn Photocathode. Physical Review Letters, 2012, 108, 194801.	7.8	3
65	Deep-ultraviolet picosecond flat-top pulses by chirp-matched sum frequency generation. Optics Letters, 2012, 37, 1619.	3.3	7
66	Chirped pulses sum frequency generation for deep-UV picosecond pulse shaping. , 2012, , .		0
67	Highly efficient generation of single-cycle MV/cm THz pulses in organic crystals. , 2012, , .		0
68	Laser-driven generation of intense single-cycle THz field. Proceedings of SPIE, 2012, , .	0.8	5
69	Coherent manipulation of free amino acids fluorescence. Physical Chemistry Chemical Physics, 2012, 14, 9317.	2.8	15
70	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
71	High quantum efficiency, low emittance electron beam from multifilamentary cathodes. , 2012, , .		0
72	Ultrabroadband TW-class Ti:sapphire laser system with adjustable central wavelength, bandwidth and multi-color operation. Optics Express, 2011, 19, 20128.	3.4	40

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73	Towards High-power Single-cycle THz Laser for Initiating High-field-sensitive Phenomena. <i>Chimia</i> , 2011, 65, 320.	0.6	2
74	Can Energetic Terahertz Pulses Initiate Surface Catalytic Reactions on the Picosecond Time Scale?. <i>Chimia</i> , 2011, 65, 323.	0.6	14
75	Strong-field single-cycle THz pulses generated in an organic crystal. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	183
76	Direct shaping of picosecond high energy deep ultraviolet pulses. <i>Applied Physics B: Lasers and Optics</i> , 2011, 105, 255-261.	2.2	8
77	Intrinsic Emittance Reduction of an Electron Beam from Metal Photocathodes. <i>Physical Review Letters</i> , 2010, 104, 234802.	7.8	61
78	Vacuum breakdown limit and quantum efficiency obtained for various technical metals using dc and pulsed voltage sources. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 1191-1202.	2.1	12
79	Electron beam characterization of a combined diode rf electron gun. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2010, 13, .	1.8	8
80	Aberration-free high-harmonic source generated with a two-colour field. <i>Europhysics Letters</i> , 2010, 89, 24001.	2.0	9
81	Two-color chirped pulse amplification with AOPGCF for self-stabilized mid-infrared radiation generation. , 2009, , .		0
82	Efficient chirped-matched third harmonic generation of long UV pulses. , 2009, , .		0
83	Two-dimensional organization of a large number of stationary optical filaments by adaptive wave front control. <i>Applied Physics B: Lasers and Optics</i> , 2008, 90, 391-394.	2.2	20
84	Optimization of the wave front of high order harmonics. <i>European Physical Journal D</i> , 2008, 48, 459-463.	1.3	32
85	Scaling strong-field interactions towards the classical limit. <i>Nature Physics</i> , 2008, 4, 386-389.	16.7	361
86	High-order harmonic wave fronts generated with controlled astigmatic infrared laser. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2008, 25, B161.	2.1	21
87	Spectral reshaping and pulse compression via sequential filamentation in gases. <i>Optics Express</i> , 2008, 16, 390.	3.4	18
88	Optimized supercontinuum generation and pulse self-compression in filaments from the UV to the IR. , 2008, , .		1
89	Polarization state dynamics in femtosecond filaments. , 2008, , .		0
90	Intense self-compressed, self-phase-stabilized few-cycle pulses at $2\frac{1}{4}\mu\text{m}$ from an optical filament. <i>Optics Letters</i> , 2007, 32, 868.	3.3	120

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91	Demonstration of a spatial filtering amplifier for high-order harmonics. Optics Letters, 2007, 32, 1498.	3.3	20
92	Control and characterization of multiple circularly polarized femtosecond filaments in argon. Optics Letters, 2007, 32, 1650.	3.3	21
93	Micromachining of hardened Portland cement pastes using femtosecond laser pulses. Materials and Structures/Materiaux Et Constructions, 2007, 40, 641-650.	3.1	3
94	Control of high-order harmonic emission using attosecond pulse trains. Journal of Modern Optics, 2006, 53, 87-96.	1.3	41
95	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
96	All-reflective high fringe contrast autocorrelator for measurement of ultrabroadband optical pulses. Optics Letters, 2006, 31, 3514.	3.3	9
97	Enhanced VUV-assisted high harmonic generation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S275-S281.	1.5	48
98	Dispersion-Free Interferometric Autocorrelator for Measurement of Ultra-Broadband Pulses. , 2006, , .		0
99	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
100	Characterisation, wavefront reconstruction, and propagation of ultra-broadband laser pulses from Hartmann-Shack measurements. , 2005, , .		2
101	Generation of intense few-cycle laser pulses through filamentation - parameter dependence. Optics Express, 2005, 13, 7541.	3.4	95
102	Validity of wave-front reconstruction and propagation of ultrabroadband pulses measured with a Hartmann-Shack sensor. Optics Letters, 2005, 30, 1563.	3.3	31
103	Frequency-sheared, time-delayed extreme-ultraviolet pulses produced by high-harmonic generation in argon. Optics Letters, 2005, 30, 1731.	3.3	0
104	Control of the frequency chirp rate of high harmonic pulses. Springer Series in Chemical Physics, 2005, , 204-206.	0.2	0
105	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
106	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
107	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
108	Single-shot dynamics of pulses from a gas-filled hollow fiber. Applied Physics B: Lasers and Optics, 2004, 79, 1033-1039.	2.2	10

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109	Ultra-broadband chirped-pulse optical parametric amplifier with angularly dispersed beams. Optics Express, 2004, 12, 518.	3.4	60
110	Generation of 148-fs pulses in a spatially dispersed amplifier. Optics Letters, 2004, 29, 201.	3.3	17
111	Phase-preserving chirped-pulse optical parametric amplification to 173 fs directly from a Ti:sapphire oscillator. Optics Letters, 2004, 29, 1369.	3.3	72
112	Gas target for efficient high-harmonic generation. , 2004, , .		0