Hans Peter Schlenvoigt

List of Publications by Year
in descending order

58 papers	1,962 citations	279798 23 h-index	243625 44 g-index
59 all docs	59 docs citations	59 times ranked	1871 citing authors

#	Article	IF	Citations
1	Tumour irradiation in mice with a laser-accelerated proton beam. Nature Physics, 2022, 18, 316-322.	16.7	62
2	Towards perfectly linearly polarized x-rays. Physical Review Research, 2022, 4, .	3.6	5
3	Off-harmonic optical probing of high intensity laser plasma expansion dynamics in solid density hydrogen jets. Scientific Reports, 2022, 12, 7287.	3.3	6
4	Laser-proton Acceleration Developments At DRACO-PW Enabling â€œIn-vivoâ€•Radiobiology. , 2022, , .		0
5	Proton beam quality enhancement by spectral phase control of a PW-class laser system. Scientific Reports, 2021, 11, 7338.	3.3	40
6	Probing ultrafast laser plasma processes inside solids with resonant small-angle x-ray scattering. Physical Review Research, 2021, 3, .	3.6	4
7	Spectral and spatial shaping of laser-driven proton beams using a pulsed high-field magnet beamline. Scientific Reports, 2020, 10, 9118.	3.3	31
8	Heisenberg limit for detecting vacuum birefringence. Physical Review D, 2020, 101, .	4.7	12
9	I-BEAT: Ultrasonic method for online measurement of the energy distribution of a single ion bunch. Scientific Reports, 2019, 9, 6714.	3.3	17
10	Ultra-intense laser pulse characterization using ponderomotive electron scattering. New Journal of Physics, 2019, 21, 123028.	2.9	21
11	Characterization of laser-driven proton acceleration from water microdroplets. Scientific Reports, 2019, 9, 17169.	3.3	5
12	Ring-like spatial distribution of laser accelerated protons in the ultra-high-contrast TNSA-regime. Plasma Physics and Controlled Fusion, 2018, 60, 055010.	2.1	4
13	On-shot characterization of single plasma mirror temporal contrast improvement. Plasma Physics and Controlled Fusion, 2018, 60, 054007.	2.1	23
14	Laser-ablation-based ion source characterization and manipulation for laser-driven ion acceleration. Plasma Physics and Controlled Fusion, 2018, 60, 054002.	2.1	6
15	Optical probing of high intensity laser interaction with micron-sized cryogenic hydrogen jets. Plasma Physics and Controlled Fusion, 2018, 60, 074003.	2.1	7
16	First demonstration of multi-MeV proton acceleration from a cryogenic hydrogen ribbon target. Plasma Physics and Controlled Fusion, 2018, 60, 044010.	2.1	18
17	Laser-driven ion acceleration via target normal sheath acceleration in the relativistic transparency regime. New Journal of Physics, 2018, 20, 013019.	2.9	56
18	All-optical structuring of laser-driven proton beam profiles. Nature Communications, 2018, 9, 5292.	12.8	16

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19	High repetition rate, multi-MeV proton source from cryogenic hydrogen jets. Applied Physics Letters, 2017, 111, .	3.3	42
20	Efficient laser-driven proton acceleration from cylindrical and planar cryogenic hydrogen jets. Scientific Reports, 2017, 7, 10248.	3.3	67
21	Relativistic Electron Streaming Instabilities Modulate Proton Beams Accelerated in Laser-Plasma Interactions. Physical Review Letters, 2017, 118, 194801.	7.8	67
22	Ionization and reflux dependence of magnetic instability generation and probing inside laser-irradiated solid thin foils. Physics of Plasmas, 2017, 24, 103115.	1.9	14
23	An online, energy-resolving beam profile detector for laser-driven proton beams. Review of Scientific Instruments, 2016, 87, 083310.	1.3	17
24	Detecting vacuum birefringence with x-ray free electron lasers and high-power optical lasers: a feasibility study. Physica Scripta, 2016, 91, 023010.	2.5	82
25	High energy conversion efficiency in laser-proton acceleration by controlling laser-energy deposition onto thin foil targets. Applied Physics Letters, 2014, 104, 081123.	3.3	55
26	Unraveling resistive versus collisional contributions to relativistic electron beam stopping power in cold-solid and in warm-dense plasmas. Physics of Plasmas, 2014, 21, 033101.	1.9	15
27	Laboratory formation of a scaled protostellar jet by coaligned poloidal magnetic field. Science, 2014, 346, 325-328.	12.6	173
28	High Resolution Energy-Angle Correlation Measurement of Hard X Rays from Laser-Thomson Backscattering. Physical Review Letters, 2013, 111, 114803.	7.8	68
29	Operation of a picosecond narrow-bandwidth Laserâ€"Thomson-backscattering X-ray source. Nuclear Instruments & Methods in Physics Research B, 2013, 309, 214-217.	1.4	9
30	Production of large volume, strongly magnetized laser-produced plasmas by use of pulsed external magnetic fields. Review of Scientific Instruments, 2013, 84, 043505.	1.3	57
31	Fast electron beam measurements from relativistically intense, frequency-doubled laserâ€"solid interactions. New Journal of Physics, 2013, 15, 093021.	2.9	5
32	Measuring fast electron spectra and laser absorption in relativistic laser-solid interactions using differential bremsstrahlung photon detectors. Review of Scientific Instruments, 2013, 84, 083505.	1.3	19
33	Supra-thermal electron beam stopping power and guiding in dense plasmas. Journal of Plasma Physics, 2013, 79, 429-435.	2.1	8
34	Relativistic High-Current Electron-Beam Stopping-Power Characterization in Solids and Plasmas: Collisional Versus Resistive Effects. Physical Review Letters, 2012, 109, 255002.	7.8	35
35	Controlling Fast-Electron-Beam Divergence Using Two Laser Pulses. Physical Review Letters, 2012, 109, 015001.	7.8	45
36	Radiobiological Effectiveness of Laser Accelerated Electrons in Comparison to Electron Beams from a Conventional Linear Accelerator. Journal of Radiation Research, 2012, 53, 395-403.	1.6	50

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37	Experiment in Planar Geometry for Shock Ignition Studies. Physical Review Letters, 2012, 108, 195002.	7.8	42
38	Laser-driven radiation sources in the ALPHA-X project. , 2011, , .		0
39	Experimental study of fast electron propagation in compressed matter. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 653, 176-180.	1.6	6
40	Dosimetry of laser-accelerated electron beams used for inÂvitro cell irradiation experiments. Radiation Measurements, 2011, 46, 2006-2009.	1.4	15
41	Optical Characterization of Laser-Driven Electron Acceleration. , 2011, , .		0
42	Establishment of technical prerequisites for cell irradiation experiments with laser-accelerated electrons. Medical Physics, 2010, 37, 1392-1400.	3.0	33
43	Laser-based Particle Acceleration. , 2010, , .		1
44	Measurement of Magnetic-Field Structures in a Laser-Wakefield Accelerator. Physical Review Letters, 2010, 105, 115002.	7.8	57
45	A cascaded laser acceleration scheme for the generation of spectrally controlled proton beams. New Journal of Physics, 2010, 12, 103009.	2.9	33
46	All-optical measurement of the hot electron sheath driving laser ion acceleration from thin foils. New Journal of Physics, 2010, 12, 103027.	2.9	37
47	Particle and x-ray generation by irradiation of gaseous and solid targets with a 100â€‰TW laser pulse. Plasma Physics and Controlled Fusion, 2009, 51, 124049.	2.1	14
48	A method of determining narrow energy spread electron beams from a laser plasma wakefield accelerator using undulator radiation. Physics of Plasmas, 2009, 16, 093102.	1.9	16
49	Operation of the all-diode pumped multi-terawatt-laser POLARIS. , 2009, , .		0
50	Laser Based Synchrotron Light Sources. , 2009, , .		0
51	A compact synchrotron radiation source driven by a laser-plasma wakefield accelerator. Nature Physics, 2008, 4, 130-133.	16.7	313
52	Spectral shaping of laser generated proton beams. New Journal of Physics, 2008, 10, 033034.	2.9	50
53	Synchrotron Radiation From Laser-Accelerated Monoenergetic Electrons. IEEE Transactions on Plasma Science, 2008, 36, 1773-1781.	1.3	4
54	Synchrotron radiation from laser-accelerated monoenergetic electron beams. , 2008, , .		0

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55	Thomson backscattering from laser-accelerated electrons. , 2006, , .		0
56	Thomson-Backscattered X Rays From Laser-Accelerated Electrons. Physical Review Letters, 2006, 96, 014802.	7.8	169
57	ReLaX: the HiBEF high-intensity short-pulse laser driver for relativistic laser-matter interaction and strong-field science at the HED instrument at EuXFEL. High Power Laser Science and Engineering, 0, , 1-15.	4.6	9
58	Scanning high-sensitive X-ray polarization microscopy. New Journal of Physics, 0, , .	2.9	1