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	A compact synchrotron radiation source driven by a laser-plasma wakefield accelerator. Nature Physics, 2008, 4, 130-133.	16.7	313
2	Laboratory formation of a scaled protostellar jet by coaligned poloidal magnetic field. Science, 2014, 346, 325-328.	12.6	173
3	Thomson-Backscattered X Rays From Laser-Accelerated Electrons. Physical Review Letters, 2006, 96, 014802.	7.8	169
4	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
5	High Resolution Energy-Angle Correlation Measurement of Hard X Rays from Laser-Thomson Backscattering. Physical Review Letters, 2013, 111, 114803.	7.8	68
6	Efficient laser-driven proton acceleration from cylindrical and planar cryogenic hydrogen jets. Scientific Reports, 2017, 7, 10248.	3.3	67
7	Relativistic Electron Streaming Instabilities Modulate Proton Beams Accelerated in Laser-Plasma Interactions. Physical Review Letters, 2017, 118, 194801.	7.8	67
8	Tumour irradiation in mice with a laser-accelerated proton beam. Nature Physics, 2022, 18, 316-322.	16.7	62
9	Measurement of Magnetic-Field Structures in a Laser-Wakefield Accelerator. Physical Review Letters, 2010, 105, 115002.	7.8	57
10	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
11	Laser-driven ion acceleration via target normal sheath acceleration in the relativistic transparency regime. New Journal of Physics, 2018, 20, 013019.	2.9	56
12	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
13	Spectral shaping of laser generated proton beams. New Journal of Physics, 2008, 10, 033034.	2.9	50
14	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
15	Controlling Fast-Electron-Beam Divergence Using Two Laser Pulses. Physical Review Letters, 2012, 109, 015001.	7.8	45
16	Experiment in Planar Geometry for Shock Ignition Studies. Physical Review Letters, 2012, 108, 195002.	7.8	42
17	High repetition rate, multi-MeV proton source from cryogenic hydrogen jets. Applied Physics Letters, 2017, 111, .	3.3	42
18	Proton beam quality enhancement by spectral phase control of a PW-class laser system. Scientific Reports, 2021, 11, 7338.	3.3	40

#	Article	IF	Citations
19	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
20	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
21	Establishment of technical prerequisites for cell irradiation experiments with laser-accelerated electrons. Medical Physics, 2010, 37, 1392-1400.	3.0	33
22	A cascaded laser acceleration scheme for the generation of spectrally controlled proton beams. New Journal of Physics, 2010, 12, 103009.	2.9	33
23	Spectral and spatial shaping of laser-driven proton beams using a pulsed high-field magnet beamline. Scientific Reports, 2020, 10, 9118.	3.3	31
24	On-shot characterization of single plasma mirror temporal contrast improvement. Plasma Physics and Controlled Fusion, 2018, 60, 054007.	2.1	23
25	Ultra-intense laser pulse characterization using ponderomotive electron scattering. New Journal of Physics, 2019, 21, 123028.	2.9	21
26	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
27	First demonstration of multi-MeV proton acceleration from a cryogenic hydrogen ribbon target. Plasma Physics and Controlled Fusion, 2018, 60, 044010.	2.1	18
28	An online, energy-resolving beam profile detector for laser-driven proton beams. Review of Scientific Instruments, 2016, 87, 083310.	1.3	17
29	I-BEAT: Ultrasonic method for online measurement of the energy distribution of a single ion bunch. Scientific Reports, 2019, 9, 6714.	3.3	17
30	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
31	All-optical structuring of laser-driven proton beam profiles. Nature Communications, 2018, 9, 5292.	12.8	16
32	Dosimetry of laser-accelerated electron beams used for inÂvitro cell irradiation experiments. Radiation Measurements, 2011, 46, 2006-2009.	1.4	15
33	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
34	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
35	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
36	Heisenberg limit for detecting vacuum birefringence. Physical Review D, 2020, 101, .	4.7	12

#	Article	IF	Citations
37	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
38	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
39	Supra-thermal electron beam stopping power and guiding in dense plasmas. Journal of Plasma Physics, 2013, 79, 429-435.	2.1	8
40	Optical probing of high intensity laser interaction with micron-sized cryogenic hydrogen jets. Plasma Physics and Controlled Fusion, 2018, 60, 074003.	2.1	7
41	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
42	Laser-ablation-based ion source characterization and manipulation for laser-driven ion acceleration. Plasma Physics and Controlled Fusion, 2018, 60, 054002.	2.1	6
43	Off-harmonic optical probing of high intensity laser plasma expansion dynamics in solid density hydrogen jets. Scientific Reports, 2022, 12, 7287.	3.3	6
44	Fast electron beam measurements from relativistically intense, frequency-doubled laserâ€“solid interactions. New Journal of Physics, 2013, 15, 093021.	2.9	5
45	Characterization of laser-driven proton acceleration from water microdroplets. Scientific Reports, 2019, 9, 17169.	3.3	5
46	Towards perfectly linearly polarized x-rays. Physical Review Research, 2022, 4, .	3.6	5
47	Synchrotron Radiation From Laser-Accelerated Monoenergetic Electrons. IEEE Transactions on Plasma Science, 2008, 36, 1773-1781.	1.3	4
48	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
49	Probing ultrafast laser plasma processes inside solids with resonant small-angle x-ray scattering. Physical Review Research, 2021, 3, .	3.6	4
50	Laser-based Particle Acceleration. , 2010, , .		1
51	Scanning high-sensitive X-ray polarization microscopy. New Journal of Physics, 0, , .	2.9	1
52	Thomson backscattering from laser-accelerated electrons. , 2006, , .		0
53	Synchrotron radiation from laser-accelerated monoenergetic electron beams. , 2008, , .		0
54	Operation of the all-diode pumped multi-terawatt-laser POLARIS. , 2009, , .		0

#	Article	IF	Citations
55	Laser-driven radiation sources in the ALPHA-X project. , 2011, , .		0
56	Laser Based Synchrotron Light Sources. , 2009, , .		0
57	Optical Characterization of Laser-Driven Electron Acceleration. , 2011, , .		0
58	Laser-proton Acceleration Developments At DRACO-PW Enabling â€œIn-vivoâ€•Radiobiology. , 2022, , .		0