Frank Stephan

List of Publications by Year
in descending order

31 papers	2,172 citations	840776 11 h-index	501196 28 g-index
31 all docs	31 docs citations	31 times ranked	2354 citing authors

#	Article	IF	Citations
1	Operation of a free-electron laser from the extreme ultraviolet to the water window. Nature Photonics, 2007, 1, 336-342.	31.4	1,455
2	A MHz-repetition-rate hard X-ray free-electron laser driven by a superconducting linear accelerator. Nature Photonics, 2020, 14, 391-397.	31.4	315
3	Detailed characterization of electron sources yielding first demonstration of European X-ray Free-Electron Laser beam quality. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	77
4	Experimentally minimized beam emittance from an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>L</mml:mi></mml:math>-band photoinjector. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	76
5	First operation of cesium telluride photocathodes in the TTF injector RF gun. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 445, 422-426.	1.6	51
6	Observation of High Transformer Ratio Plasma Wakefield Acceleration. Physical Review Letters, 2018, 121, 064801.	7.8	44
7	Passive Ballistic Microbunching of Nonultrarelativistic Electron Bunches Using Electromagnetic Wakefields in Dielectric-Lined Waveguides. Physical Review Letters, 2019, 122, 044801.	7.8	24
8	Spatio-temporal shaping of photocathode laser pulses for linear electron accelerators. Physics-Uspekhi, 2017, 60, 1039-1050.	2.2	17
9	Preparations for a plasma wakefield acceleration (PWA) experiment at PITZ. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 740, 74-80.	1.6	14
10	Design of an L-band normally conducting RF gun cavity for high peak and average RF power. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 854, 113-126.	1.6	13
11	Photocathode laser based bunch shaping for high transformer ratio plasma wakefield acceleration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 107-110.	1.6	11
12	Observation of the Self-Modulation Instability via Time-Resolved Measurements. Physical Review Letters, 2018, 120, 144802.	7.8	11
13	Direct measurement of photocathode time response in a high-brightness photoinjector. Applied Physics Letters, 2022, 120, .	3.3	11
14	First results of the plasma wakefield acceleration experiment at PITZ. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 37-42.	1.6	9
15	Lifetime studies of Cs2Te photocathodes in a normal conducting RF gun. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 871, 97-104.	1.6	7
16	Dark current studies of an L-band normal conducting RF gun. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1010, 165546.	1.6	7
17	Jitter mitigation in low density discharge plasma cells for wakefield accelerators. Journal of Applied Physics, 2019, 125, .	2.5	6
18	Single shot cathode transverse momentum imaging in high brightness photoinjectors. Physical Review Accelerators and Beams, 2020, 23, .	1.6	6

#	Article	IF	Citations
19	Modeling and simulation of RF photoinjectors for coherent light sources. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 889, 129-137.	1.6	5
20	Plasma density measurement by means of self-modulation of long electron bunches. Plasma Physics and Controlled Fusion, 2019, 61, 045012.	2.1	4
21	Characterization of self-modulated electron bunches in an argon plasma. Journal of Physics: Conference Series, 2018, 1067, 042012.	0.4	2
22	Generation of quasi continuous-wave electron beams in an L-band normal conducting pulsed RF injector for laboratory astrophysics experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 903, 119-125.	1.6	1
23	Preliminary study for the laboratory experiment of cosmic-rays driven magnetic field amplification. High Energy Density Physics, 2019, 32, 31-43.	1.5	1
24	Towards experimental investigation of hosing instability mitigation at the PITZ facility. Journal of Physics: Conference Series, 2020, 1596, 012003.	0.4	1
25	Budgeting the emittance of photoemitted electron beams in a space-charge affected emission regime for free-electron laser applications. AIP Advances, 2020, 10, 035017.	1.3	1
26	Polymer foil windows for gasâ€“vacuum separation in accelerator applications. AIP Advances, 2020, 10, 025224.	1.3	1
27	Frequency-detuning dependent transient coaxial rf coupler kick in an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>L</mml:mi></mml:math> -band long-pulse high-gradient rf photogun. Physical Review Accelerators and Beams, 2020, 23, .	1.6	1
28	Design studies of a continuous-wave normal conducting buncher for European X-ray Free Electron Laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1027, 166220.	1.6	1
29	Overview and prospects of plasma wakefield acceleration experiments at PITZ. Journal of Physics: Conference Series, 2019, 1350, 012057.	0.4	0
30	Experimental benchmark study of multiphysics simulations of an L-band high average power RF gun. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1004, 165344.	1.6	0
31	Anomalous correlation between quantum efficiency and transverse momentum spread in semiconductor cathode photoemission. Physical Review Accelerators and Beams, 2022, 25, .	1.6	0