Th Tschentscher

List of Publications by Year
in descending order

48 papers	4,121 citations	201674 27 h-index	189892 50 g-index
51 all docs	51 docs citations	51 times ranked	4147 citing authors

#	Article	IF	Citations
1	Femtosecond diffractive imaging with a soft-X-ray free-electron laser. Nature Physics, 2006, 2, 839-843.	16.7	910
2	Ultrafast Bond Softening in Bismuth: Mapping a Solid's Interatomic Potential with X-rays. Science, 2007, 315, 633-636.	12.6	341
3	Atomic-Scale Visualization of Inertial Dynamics. Science, 2005, 308, 392-395.	12.6	324
4	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
5	Photon Beam Transport and Scientific Instruments at the European XFEL. Applied Sciences (Switzerland), 2017, 7, 592.	2.5	232
6	Clocking Femtosecond X Rays. Physical Review Letters, 2005, 94, 114801.	7.8	230
7	Ultrafast X-ray pulse characterization at free-electron lasers. Nature Photonics, 2012, 6, 852-857.	31.4	189
8	Gas detectors for x-ray lasers. Journal of Applied Physics, 2008, 103, .	2.5	147
9	Targets for high repetition rate laser facilities: needs, challenges and perspectives. High Power Laser Science and Engineering, 2017, 5, .	4.6	106
10	Observation of Ultrafast Nonequilibrium Collective Dynamics in Warm Dense Hydrogen. Physical Review Letters, 2010, 104, 125002.	7.8	101
11	Femtosecond x-ray pulse length characterization at the Linac Coherent Light Source free-electron laser. New Journal of Physics, 2011, 13, 093024.	2.9	99
12	Resolving Ultrafast Heating of Dense Cryogenic Hydrogen. Physical Review Letters, 2014, 112, 105002.	7.8	95
13	AMO science at the FLASH and European XFEL free-electron laser facilities. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164002.	1.5	90
14	Subnanometer-Scale Measurements of the Interaction of Ultrafast Soft X-Ray Free-Electron-Laser Pulses with Matter. Physical Review Letters, 2007, 98, 145502.	7.8	71
15	Phase transition lowering in dynamically compressed silicon. Nature Physics, 2019, 15, 89-94.	16.7	70
16	Thomson scattering from near-solid density plasmas using soft X-ray free electron lasers. High Energy Density Physics, 2007, 3, 120-130.	1.5	61
17	X-Ray Diffuse Scattering Measurements of Nucleation Dynamics at Femtosecond Resolution. Physical Review Letters, 2008, 100, 135502.	7.8	58
18	Double and Single Ionization of Helium by 58-keV X Rays. Physical Review Letters, 1996, 76, 4685-4688.	7.8	48

#	Article	IF	Citations
19	Angle-Resolved Electron Spectroscopy of Laser-Assisted Auger Decay Induced by a Few-Femtosecond X-Ray Pulse. Physical Review Letters, 2012, 108, 063007.	7.8	46
20	Soft x-ray free electron laser microfocus for exploring matter under extreme conditions. Optics Express, 2009, 17, 18271.	3.4	44
21	Fluence thresholds for grazing incidence hard x-ray mirrors. Applied Physics Letters, 2015, 106, .	3.3	41
22	Cross-section ratio of double to single ionization of helium by Compton scattering of 40â€“100-keV x rays. Physical Review A, 1999, 59, 371-379.	2.5	38
23	Decay of Cystalline Order and Equilibration during the Solid-to-Plasma Transition Induced by 20-fs Microfocused 92-eV Free-Electron-Laser Pulses. Physical Review Letters, 2011, 106, 164801.	7.8	37
24	High energy scattering beamlines at European Synchrotron Radiation Facility. Review of Scientific Instruments, 1995, 66, 1798-1801.	1.3	36
25	Experiments with Very High Energy Synchrotron Radiation. Journal of Synchrotron Radiation, 1998, 5, 286-292.	2.4	36
26	XUV spectroscopic characterization of warm dense aluminum plasmas generated by the free-electron-laser FLASH. Laser and Particle Beams, 2012, 30, 45-56.	1.0	36
27	The High Energy Density Scientific Instrument at the European XFEL. Journal of Synchrotron Radiation, 2021, 28, 1393-1416.	2.4	33
28	Thomson scattering on inhomogeneous targets. Physical Review E, 2010, 82, 056404.	2.1	27
29	Setup for meV-resolution inelastic X-ray scattering measurements and X-ray diffraction at the Matter in Extreme Conditions endstation at the Linac Coherent Light Source. Review of Scientific Instruments, 2018, 89, 10F104.	1.3	25
30	A compact soft X-ray spectrograph combining high efficiency and resolution. Journal of Instrumentation, 2010, 5, P02004-P02004.	1.2	24
31	Soft X-ray scattering using FEL radiation for probing near-solid density plasmas at few electron volt temperatures. High Energy Density Physics, 2010, 6, 15-20.	1.5	23
32	Equilibration dynamics and conductivity of warm dense hydrogen. Physical Review E, 2014, 90, 013104.	2.1	22
33	Probing near-solid density plasmas using soft x-ray scattering. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 194017.	1.5	20
34	Time-dependent wave front propagation simulation of a hard x-ray split-and-delay unit: Towards a measurement of the temporal coherence properties of x-ray free electron lasers. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	20
35	Thomson scattering in dense plasmas with density and temperature gradients. High Energy Density Physics, 2009, 5, 208-211.	1.5	17
36	Femtosecond laser-generated high-energy-density states studied by x-ray FELs. Plasma Physics and Controlled Fusion, 2017, 59, 014028.	2.1	17

#	Article	IF	Citations
37	High-resolution inelastic x-ray scattering at the high energy density scientific instrument at the European X-Ray Free-Electron Laser. Review of Scientific Instruments, 2021, 92, 013101.	1.3	15
38	Two-color Thomson scattering at FLASH. High Energy Density Physics, 2011, 7, 145-149.	1.5	14
39	Diffraction Properties of Periodic Lattices under Free Electron Laser Radiation. Physical Review Letters, 2010, 104, 125503.	7.8	12
40	Investigations of ultrafast phenomena in high-energy density physics using X-ray FEL radiation. European Physical Journal D, 2005, 36, 193-197.	1.3	8
41	Evidence of shock-compressed stishovite above 300â€‰GPa. Scientific Reports, 2020, 10, 10197.	3.3	8
42	Testing quantum mechanics in non-Minkowski space-time with high power lasers and 4th generation light sources. Scientific Reports, 2012, 2, 491.	3.3	8
43	Studying planetary matter using intense x-ray pulses. Plasma Physics and Controlled Fusion, 2015, 57, 014003.	2.1	6
44	Ultrafast electron kinetics in short pulse laser-driven dense hydrogen. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 224004.	1.5	6
45	Ultrafast time dynamics studies of periodic lattices with free electron laser radiation. Journal of Applied Physics, 2012, 112, .	2.5	5
46	In situ x-ray diffraction study of dynamically compressed <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -cristobalite using a dynamic diamond anvil cell. Physical Review B, 2022, 105, .	3.2	4
47	A hard x-ray split-and-delay unit for the HED experiment at the European XFEL. Proceedings of SPIE, 2014, , .	0.8	3
48	EUCALL Annual Meeting 2017. Synchrotron Radiation News, 2017, 30, 6-8.	0.8	1