Markus Roth

List of Publications by Year
in descending order

203 papers	12,737 citations	44069 48 h-index	23533 111 g-index
204 all docs	204 docs citations	204 times ranked	4006 citing authors

#	Article	IF	Citations
1	Energetic proton generation in ultra-intense laserâ€“solid interactions. Physics of Plasmas, 2001, 8, 542-549.	1.9	1,504
2	Intense High-Energy Proton Beams from Petawatt-Laser Irradiation of Solids. Physical Review Letters, 2000, 85, 2945-2948.	7.8	1,495
3	Fast Ignition by Intense Laser-Accelerated Proton Beams. Physical Review Letters, 2001, 86, 436-439.	7.8	1,154
4	Electron, photon, and ion beams from the relativistic interaction of Petawatt laser pulses with solid targets. Physics of Plasmas, 2000, 7, 2076-2082.	1.9	920
5	Ultralow Emittance, Multi-MeV Proton Beams from a Laser Virtual-Cathode Plasma Accelerator. Physical Review Letters, 2004, 92, 204801.	7.8	494
6	MeV Ion Jets from Short-Pulse-Laser Interaction with Thin Foils. Physical Review Letters, 2002, 89, 085002.	7.8	389
7	Fast Ion Generation by High-Intensity Laser Irradiation of Solid Targets and Applications. Fusion Science and Technology, 2006, 49, 412-439.	1.1	388
8	Bright Laser-Driven Neutron Source Based on the Relativistic Transparency of Solids. Physical Review Letters, 2013, 110, 044802.	7.8	271
9	Maximum Proton Energy above 85ÂMeV from the Relativistic Interaction of Laser Pulses with Micrometer Thick<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CH</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2016, 116, 205002.	7.8	234
10	Energetic ions generated by laser pulses: A detailed study on target properties. Physical Review Special Topics: Accelerators and Beams, 2002, 5, .	1.8	205
11	Present and future perspectives for high energy density physics with intense heavy ion and laser beams. Laser and Particle Beams, 2005, 23, .	1.0	196
12	Radiochromic film imaging spectroscopy of laser-accelerated proton beams. Review of Scientific Instruments, 2009, 80, 033301.	1.3	182
13	Commissioning and early experiments of the PHELIX facility. Applied Physics B: Lasers and Optics, 2010, 100, 137-150.	2.2	174
14	Nanosecond formation of diamond and lonsdaleite by shock compression of graphite. Nature Communications, 2016, 7, 10970.	12.8	167
15	Spatial Uniformity of Laser-Accelerated Ultrahigh-Current MeV Electron Propagation in Metals and Insulators. Physical Review Letters, 2003, 91, 255002.	7.8	166
16	Controlled Transport and Focusing of Laser-Accelerated Protons with Miniature Magnetic Devices. Physical Review Letters, 2008, 101, 055004.	7.8	152
17	Formation of diamonds in laser-compressed hydrocarbons at planetary interior conditions. Nature Astronomy, 2017, 1, 606-611.	10.1	152
18	Probing warm dense lithium by inelastic X-ray scattering. Nature Physics, 2008, 4, 940-944.	16.7	148

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19	Laser-driven platform for generation and characterization of strong quasi-static magnetic fields. New Journal of Physics, 2015, 17, 083051.	2.9	130
20	The offline software framework of the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 1485-1496.	1.6	120
21	Comparison of Laser Ion Acceleration from the Front and Rear Surfaces of Thin Foils. Physical Review Letters, 2005, 94, 045004.	7.8	119
22	Fast ignition with laser-driven proton and ion beams. Nuclear Fusion, 2014, 54, 054006.	3.5	119
23	Proton spectra from ultraintense laserâ€“plasma interaction with thin foils: Experiments, theory, and simulation. Physics of Plasmas, 2003, 10, 3283-3289.	1.9	110
24	Focusing of short-pulse high-intensity laser-accelerated proton beams. Nature Physics, 2012, 8, 139-142.	16.7	110
25	Effects of front surface plasma expansion on proton acceleration in ultraintense laser irradiation of foil targets. Laser and Particle Beams, 2008, 26, 591-596.	1.0	98
26	Ultrafast Melting of Carbon Induced by Intense Proton Beams. Physical Review Letters, 2010, 105, 265701.	7.8	93
27	Development and calibration of a Thomson parabola with microchannel plate for the detection of laser-accelerated MeV ions. Review of Scientific Instruments, 2008, 79, 093306.	1.3	88
28	Computer Simulation of the Three-Dimensional Regime of Proton Acceleration in the Interaction of Laser Radiation with a Thin Spherical Target. Plasma Physics Reports, 2001, 27, 363-371.	0.9	86
29	Guiding of relativistic electron beams in dense matter by laser-driven magnetostatic fields. Nature Communications, 2018, 9, 102.	12.8	86
30	Instrumentation for diagnostics and control of laser-accelerated proton (ion) beams. Physica Medica, 2014, 30, 255-270.	0.7	76
31	High energy heavy ion jets emerging from laser plasma generated by long pulse laser beams from the NHELIX laser system at GSI. Laser and Particle Beams, 2005, 23, 503-512.	1.0	74
32	Experimental discrimination of ion stopping models near the Bragg peak in highly ionized matter. Nature Communications, 2017, 8, 15693.	12.8	67
33	Spectral properties of laser-accelerated mid-Z MeVâˆ•u ion beams. Physics of Plasmas, 2005, 12, 056314.	1.9	66
34	Laser accelerated ions and electron transport in ultra-intense laser matter interaction. Laser and Particle Beams, 2005, 23, .	1.0	65
35	Comparative spectra and efficiencies of ions laser-accelerated forward from the front and rear surfaces of thin solid foils. Physics of Plasmas, 2007, 14, 053105.	1.9	62
36	Status of PHELIX laser and first experiments. Laser and Particle Beams, 2005, 23, .	1.0	61

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37	Increased efficiency of short-pulse laser-generated proton beams from novel flat-top cone targets. Physics of Plasmas, 2008, 15, .	1.9	61
38	Laser-driven ion acceleration with hollow laser beams. Physics of Plasmas, 2015, 22, .	1.9	60
39	Laser-driven strong magnetostatic fields with applications to charged beam transport and magnetized high energy-density physics. Physics of Plasmas, 2018, 25, .	1.9	58
40	Beam collimation and transport of quasineutral laser-accelerated protons by a solenoid field. Physics of Plasmas, 2010, 17, .	1.9	56
41	Energy loss of heavy ions in laser-produced plasmas. Europhysics Letters, 2000, 50, 28-34.	2.0	55
42	Energy Loss and Charge Transfer of Argon in a Laser-Generated Carbon Plasma. Physical Review Letters, 2013, 110, 115001.	7.8	55
43	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
44	Shaping of Intense Ion Beams into Hollow Cylindrical Form. Physical Review Letters, 2000, 85, 4518-4521.	7.8	52
45	Intense electron and proton beams from PetaWatt laserâ€“matter interactions. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 455, 130-139.	1.6	50
46	Temporal contrast control at the PHELIX petawatt laser facility by means of tunable sub-picosecond optical parametric amplification. Applied Physics B: Lasers and Optics, 2014, 116, 429-435.	2.2	50
47	Stellar magnetic activity and variability of oscillation parameters: An investigation of 24 solar-like stars observed by<i>Kepler</i>. Astronomy and Astrophysics, 2017, 598, A77.	5.1	50
48	Transverse Characteristics of Short-Pulse Laser-Produced Ion Beams: A Study of the Acceleration Dynamics. Physical Review Letters, 2006, 96, 154801.	7.8	49
49	Probing the Complex Ion Structure in Liquid Carbon at 100ÂGPa. Physical Review Letters, 2013, 111, 255501.	7.8	49
50	Laser accelerated protons captured and transported by a pulse power solenoid. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	46
51	Laser-plasmas in the relativistic-transparency regime: Science and applications. Physics of Plasmas, 2017, 24, 056702.	1.9	44
52	Plasma physics with intense laser and ion beams. Nuclear Instruments & Methods in Physics Research B, 2000, 161-163, 9-18.	1.4	43
53	The generation of high-quality, intense ion beams by ultra-intense lasers. Plasma Physics and Controlled Fusion, 2002, 44, B99-B108.	2.1	43
54	Beam profiles of proton and carbon ions in the relativistic transparency regime. New Journal of Physics, 2013, 15, 123035.	2.9	43

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55	Characterization of a novel, short pulse laser-driven neutron source. Physics of Plasmas, 2013, 20, .	1.9	43
56	Towards highest peak intensities for ultra-short MeV-range ion bunches. Scientific Reports, 2015, 5, 12459.	3.3	42
57	Modeling of the electrostatic sheath shape on the rear target surface in short-pulse laser-driven proton acceleration. Laser and Particle Beams, 2006, 24, 163-168.	1.0	40
58	Energy loss of argon in a laser-generated carbon plasma. Physical Review E, 2010, 81, 026401.	2.1	40
59	Intense, directed neutron beams from a laser-driven neutron source at PHELIX. Physics of Plasmas, 2018, 25, .	1.9	40
60	Petawatt laser system and experiments. IEEE Journal of Selected Topics in Quantum Electronics, 2000, 6, 676-688.	2.9	37
61	Shaping laser accelerated ions for future applications â€“ The LIGHT collaboration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 740, 94-98.	1.6	37
62	Spectral Enhancement in the Double Pulse Regime of Laser Proton Acceleration. Physical Review Letters, 2010, 105, 195008.	7.8	36
63	Interaction of annular-focused laser beams with solid targets. Laser and Particle Beams, 2015, 33, 541-550.	1.0	36
64	Laser beam-profile impression and target thickness impact on laser-accelerated protons. Physics of Plasmas, 2008, 15, .	1.9	34
65	Characterisation of deuterium spectra from laser driven multi-species sources by employing differentially filtered image plate detectors in Thomson spectrometers. Review of Scientific Instruments, 2014, 85, 093303.	1.3	34
66	Femtosecond dynamics â€“ snapshots of the early ion-track evolution. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 4-26.	1.4	34
67	A UNIFIED APPROACH TO THE HELIOSEISMIC INVERSION PROBLEM OF THE SOLAR MERIDIONAL FLOW FROM GLOBAL OSCILLATIONS. Astrophysical Journal, 2011, 734, 97.	4.5	33
68	Review on the current status and prospects of fast ignition in fusion targets driven by intense, laser generated proton beams. Plasma Physics and Controlled Fusion, 2009, 51, 014004.	2.1	32
69	Pre-plasma formation in experiments using petawatt lasers. Optics Express, 2014, 22, 29505.	3.4	32
70	Neutron imaging with the short-pulse laser driven neutron source at the Trident laser facility. Journal of Applied Physics, 2016, 120, .	2.5	32
71	Targets with cone-shaped microstructures from various materials for enhanced high-intensity laserâ€“matter interaction. High Power Laser Science and Engineering, 2021, 9, .	4.6	32
72	Focusing and transport of high-intensity multi-MeV proton bunches from a compact laser-driven source. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	31

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73	Assessment of Potential for Ion-Driven Fast Ignition. Fusion Science and Technology, 2006, 49, 399-411.	1.1	30
74	Surface transport of energetic electrons in intense picosecond laser-foil interactions. Applied Physics Letters, 2011, 99, .	3.3	30
75	Experimental investigation of the effective charge state of ions in beamâ€“plasma interaction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 464, 247-252.	1.6	28
76	Controlling the properties of ultraintense laserâ€“proton sources using transverse refluxing of hot electrons in shaped mass-limited targets. Plasma Physics and Controlled Fusion, 2011, 53, 105008.	2.1	28
77	Inertial fusion energy issues of intense heavy ion and laser beams interacting with ionized matter studied at GSI-Darmstadt. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 577, 8-13.	1.6	27
78	Demonstration of X-ray Thomson scattering as diagnostics for miscibility in warm dense matter. Nature Communications, 2020, 11, 2620.	12.8	27
79	Laser accelerated ions in ICF research prospects and experiments. Plasma Physics and Controlled Fusion, 2005, 47, B841-B850.	2.1	26
80	Proton acceleration experiments and warm dense matter research using high power lasers. Plasma Physics and Controlled Fusion, 2009, 51, 124039.	2.1	26
81	Accelerating ions with high-energy short laser pulses from submicrometer thick targets. High Power Laser Science and Engineering, 2016, 4, .	4.6	26
82	High flux, beamed neutron sources employing deuteron-rich ion beams from D₂O-ice layered targets. Plasma Physics and Controlled Fusion, 2017, 59, 064004.	2.1	26
83	Development of a Nomarski-type multi-frame interferometer as a time and space resolving diagnostics for the free electron density of laser-generated plasma. Review of Scientific Instruments, 2012, 83, 043501.	1.3	25
84	Predictions for the energy loss of light ions in laser-generated plasmas at low and medium velocities. Physical Review E, 2015, 92, 053109.	2.1	25
85	On measurements of stopping power in explosively driven plasma targets. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 415, 715-719.	1.6	24
86	Commissioning of a compact laser-based proton beam line for high intensity bunches around 10ÂMeV. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	24
87	Simultaneous observation of angularly separated laser-driven proton beams accelerated via two different mechanisms. Physics of Plasmas, 2015, 22, .	1.9	24
88	Calibration of time of flight detectors using laser-driven neutron source. Review of Scientific Instruments, 2015, 86, 073308.	1.3	23
89	Enhanced brightness of a laser-driven x-ray and particle source by microstructured surfaces of silicon targets. Physics of Plasmas, 2020, 27, .	1.9	22
90	Laser ion acceleration with micro-grooved targets. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 577, 186-190.	1.6	21

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91	A novel nuclear pyrometry for the characterization of high-energy bremsstrahlung and electrons produced in relativistic laser-plasma interactions. Physics of Plasmas, 2011, 18, .	1.9	21
92	Multi-pulse enhanced laser ion acceleration using plasma half cavity targets. Applied Physics Letters, 2012, 101, .	3.3	20
93	2D radiation-hydrodynamics modeling of laser-plasma targets for ion stopping measurements. High Energy Density Physics, 2013, 9, 158-166.	1.5	20
94	Selective deuterium ion acceleration using the Vulcan petawatt laser. Physics of Plasmas, 2015, 22, 053102.	1.9	19
95	Experimental verification of high energy laser-generated impulse for remote laser control of space debris. Scientific Reports, 2018, 8, 8453.	3.3	18
96	Demonstration of non-destructive and isotope-sensitive material analysis using a short-pulsed laser-driven epi-thermal neutron source. Nature Communications, 2022, 13, 1173.	12.8	18
97	Studying the Dynamics of Relativistic Laser-Plasma Interaction on Thin Foils by Means of Fourier-Transform Spectral Interferometry. Physical Review Letters, 2017, 118, 255003.	7.8	17
98	High-energy-density-science capabilities at the Facility for Antiproton and Ion Research. Physics of Plasmas, 2020, 27, .	1.9	16
99	Scaling of ion energies in the relativistic-induced transparency regime. Laser and Particle Beams, 2015, 33, 695-703.	1.0	15
100	Role of charge transfer in heavy-ion-beamâ€“plasma interactions at intermediate energies. Physical Review E, 2015, 91, 023104.	2.1	15
101	A study on the effects and visibility of low-order aberrations on laser beams with orbital angular momentum. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	15
102	Detectability of large-scale flows in global helioseismic data â€“ A numerical experiment. Astronomy and Astrophysics, 2002, 396, 243-253.	5.1	15
103	Physics of Plasmas, 2015, 22, 056307.	1.9	14
104	Charge state of Zn projectile ions in partially ionized plasma: Simulations. Laser and Particle Beams, 2006, 24, 131-141.	1.0	13
105	X-ray scattering from warm dense iron. High Energy Density Physics, 2013, 9, 573-577.	1.5	13
106	NAIS: Nuclear activation-based imaging spectroscopy. Review of Scientific Instruments, 2013, 84, 073305.	1.3	13
107	High dynamic range, large temporal domain laser pulse measurement. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	13
108	A MC approach to simulate up- and down-going neutrino showers including local topographic conditions. Astroparticle Physics, 2007, 26, 402-413.	4.3	12

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109	Warp simulations for capture and control of laser-accelerated proton beams. Journal of Physics: Conference Series, 2010, 244, 022052.	0.4	12
110	First application studies at the laser-driven LIGHT beamline: Improving proton beam homogeneity and imaging of a solid target. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 173-176.	1.6	12
111	Analysis of laser-proton acceleration experiments for development of empirical scaling laws. Physical Review E, 2021, 104, 045210.	2.1	12
112	High resolution Thomson Parabola Spectrometer for full spectral capture of multi-species ion beams. Review of Scientific Instruments, 2016, 87, 083304.	1.3	11
113	Dual Ion Species Plasma Expansion from Isotopically Layered Cryogenic Targets. Physical Review Letters, 2018, 120, 204801.	7.8	11
114	Laser based neutron spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 932, 27-30.	1.6	11
115	Characterizing laser-plasma ion accelerators driving an intense neutron beam via nuclear signatures. Scientific Reports, 2019, 9, 2004.	3.3	11
116	Ultra-low emittance, high current proton beams produced with a laser-virtual cathode sheath accelerator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 544, 277-284.	1.6	10
117	Using cosmic neutrinos to search for nonperturbative physics at the Pierre Auger Observatory. Physical Review D, 2010, 82, .	4.7	10
118	Methods of charge-state analysis of fast ions inside matter based on their X-ray spectral distribution. Laser and Particle Beams, 2002, 20, 479-483.	1.0	9
119	Laser accelerated heavy particles â€“ Tailoring of ion beams on a nano-scale. Optics Communications, 2006, 264, 519-524.	2.1	9
120	The diagnostics of ultra-short pulse laser-produced plasma. Journal of Instrumentation, 2011, 6, R09001-R09001.	1.2	9
121	Influence of fs-laser desorption on target normal sheath accelerated ions. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	9
122	Laser-induced microstructures on silicon for laser-driven acceleration experiments. High Power Laser Science and Engineering, 2017, 5, .	4.6	9
123	Noise reduction in third order cross-correlation by angle optimization of the interacting beams. Optics Express, 2017, 25, 9252.	3.4	9
124	Focusing of multi-MeV, subnanosecond proton bunches from a laser-driven source. Physical Review Accelerators and Beams, 2019, 22, .	1.6	9
125	Intense ion beams accelerated by Petawatt-class Lasers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 464, 201-205.	1.6	8
126	Particle accelerator physics and technology for high energy density physics research. European Physical Journal D, 2007, 44, 293-300.	1.3	8

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127	Dynamic control and enhancement of laser-accelerated protons using multiple laser pulses. Comptes Rendus Physique, 2009, 10, 188-196.	0.9	8
128	X-ray Thomson scattering on shocked graphite. High Energy Density Physics, 2012, 8, 46-49.	1.5	8
129	Time-dependent coupling of solar oscillations. Astronomy and Astrophysics, 2003, 405, 779-786.	5.1	8
130	A spectrometer on chemical vapour deposition-diamond basis for the measurement of the charge-state distribution of heavy ions in a laser-generated plasma. Review of Scientific Instruments, 2013, 84, 043301.	1.3	7
131	Feasibility study of the magnetic beam self-focusing phenomenon in a stack of conducting foils: Application to TNSA proton beams. Laser and Particle Beams, 2013, 31, 81-88.	1.0	7
132	Identification of X-ray spectra in the Na-like to O-like rubidium ions in the range of 3.8â€“7.3Ã…. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 148, 70-89.	2.3	7
133	Laser-induced acceleration of Helium ions from unpolarized gas jets. Plasma Physics and Controlled Fusion, 2019, 61, 115012.	2.1	7
134	Spatially resolved online particle detector using scintillators for laser-driven particle sources. Review of Scientific Instruments, 2021, 92, 093302.	1.3	7
135	Picosecond contrast degradation by surface imperfections in chirped-pulse-amplification stretchers. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 1735.	1.5	7
136	Towards High-Repetition-Rate Fast Neutron Sources Using Novel Enabling Technologies. Instruments, 2021, 5, 38.	1.8	7
137	Laser-produced proton beams as a tool for equation-of-state studies of warm dense matter. High Energy Density Physics, 2006, 2, 16-20.	1.5	6
138	Reflection of intense laser light from microstructured targets as a potential diagnostic of laser focus and plasma temperature. High Power Laser Science and Engineering, 2019, 7, .	4.6	6
139	<title>PHELIX: a petawatt high-energy laser for heavy ion experiments</title>. , 2001, , .		5
140	Experimental characterization of picosecond laser interaction with solid targets. Physical Review E, 2008, 77, 056403.	2.1	5
141	Transport of laser accelerated proton beams and isochoric heating of matter. Journal of Physics: Conference Series, 2010, 244, 012009.	0.4	5
142	Development of High-Power Laser Based Nuclear Applications. Fusion Science and Technology, 2012, 61, 231-236.	1.1	5
143	Ion Acceleration: TNSA. , 2013, , 303-350.		5
144	A novel double hohlraum target to create a moderately coupled plasma for ion stopping experiments. Nuclear Instruments & Methods in Physics Research B, 2015, 343, 123-131.	1.4	5

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145	In-situ formation of solidified hydrogen thin-membrane targets using a pulse tube cryocooler. Journal of Physics: Conference Series, 2016, 713, 012006.	0.4	5
146	Creation and characterization of free-standing cryogenic targets for laser-driven ion acceleration. Review of Scientific Instruments, 2017, 88, 093512.	1.3	5
147	Investigation of the temperature in dense carbon near the solid-liquid phase transition between 100ÂGPa and 200ÂGPa with spectrally resolved X-ray scattering. High Energy Density Physics, 2019, 32, 56-62.	1.5	5
148	Advanced Postirradiation Characterization of Nuclear Fuels Using Pulsed Neutrons. Jom, 2020, 72, 187-196.	1.9	5
149	Anticorrelated Couplingpâ€Modes. Astrophysical Journal, 2001, 559, 1165-1170.	4.5	4
150	Prospects For and Progress Towards Laser-Driven Particle Therapy Accelerators. , 2010, , .		4
151	Time- and spectrally resolved measurements of laser-driven hohlraum radiation. Physical Review E, 2011, 84, 016412.	2.1	4
152	Investigation of the solidâ€“liquid phase transition of carbon at 150ÂGPa with spectrally resolved X-ray scattering. High Energy Density Physics, 2015, 14, 38-43.	1.5	4
153	Design and implementation of a Thomson parabola for fluence dependent energy-loss measurements at the Neutralized Drift Compression eXperiment. Review of Scientific Instruments, 2018, 89, 103302.	1.3	4
154	Short-Pulse Laser-Driven Moderated Neutron Source. EPJ Web of Conferences, 2020, 231, 01008.	0.3	4
155	Microstructured layered targets for improved laser-induced x-ray backlighters. Physical Review E, 2021, 104, 065207.	2.1	4
156	M.I-12: short pulse laser generated ion beams for fast ignition. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 544, 55-60.	1.6	3
157	Status Report of the New Darmstadt Polarized Electron Injector. , 2009, , .		3
158	Polarized Electrons in Darmstadt: Recent Developments. , 2009, , .		3
159	Reactions with polarized electrons and photons at low momentum transfers at the superconducting Darmstadt electron linear accelerator Sâ€“DALINAC. Journal of Physics: Conference Series, 2011, 295, 012152.	0.4	3
160	Initial experimental evidence of self-collimation of target-normal-sheath-accelerated proton beam in a stack of conducting foils. Physics of Plasmas, 2013, 20, .	1.9	3
161	Diagnostics for studies of novel laser ion acceleration mechanisms. Review of Scientific Instruments, 2014, 85, 113302.	1.3	3
162	Chemical-vapor deposited ultra-fast diamond detectors for temporal measurements of ion bunches. Review of Scientific Instruments, 2018, 89, 093304.	1.3	3

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163	Development of a Setup for Material Identification Based on Laser-Driven Neutron Resonance Spectroscopy. EPJ Web of Conferences, 2020, 231, 01006.	0.3	3
164	High Energy Electrons, Positrons and Photonuclear Reactions in Petawatt Laser-Solid Experiments. , 2000, , 145-156.		3
165	Absolute calibration of Fujifilm BAS-TR image plate response to laser driven protons up to 40 MeV. Review of Scientific Instruments, 2022, 93, .	1.3	3
166	<title>Intense ion beams accelerated by relativistic laser plasmas</title>. , 2001, 4510, 52.		2
167	Gapfilling interrupted helioseismic data with the EM algorithm. Astronomy Letters, 2010, 36, 64-73.	1.0	2
168	Advanced space power and propulsion based on lasers. European Physical Journal: Special Topics, 2015, 224, 2657-2663.	2.6	2
169	A bright neutron source driven by relativistic transparency of solids. Journal of Physics: Conference Series, 2016, 688, 012094.	0.4	2
170	Fabrication and characterization of thin polymer targets for laser-driven ion acceleration. Journal of Physics: Conference Series, 2016, 713, 012005.	0.4	2
171	A novel experimental setup for energy loss and charge state measurements in dense moderately coupled plasma using laser-heated hohlraum targets. Journal of Physics: Conference Series, 2016, 688, 012081.	0.4	2
172	Temperature measurement of hohlraum radiation for energy loss experiments in indirectly laser heated carbon plasma. Physical Review E, 2017, 96, 043210.	2.1	2
173	Simulation studies on generation, handling and transport of laser-accelerated carbon ions. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 168-172.	1.6	2
174	Combining two-photon-polymerization with UV-lithography for laser particle acceleration targets. Journal of Physics: Conference Series, 2018, 1079, 012012.	0.4	2
175	Intense, High-Quality Ion Beams Generated by Ultra-Intense Lasers. AIP Conference Proceedings, 2002, , .	0.4	1
176	Intense ion beams accelerated by ultra-intense laser pulses. AIP Conference Proceedings, 2002, , .	0.4	1
177	Laser Accelerated, High Quality Ion Beams. Hyperfine Interactions, 2006, 162, 45-53.	0.5	1
178	Beam collimation and transport of laser-accelerated protons by a solenoid field. Journal of Physics: Conference Series, 2010, 244, 022036.	0.4	1
179	The HiPER Experimental Road Map. , 2010, , .		1
180	Image plate characterization and absolute calibration to low kilo-electron-volt electrons. Review of Scientific Instruments, 2014, 85, 113306.	1.3	1

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181	Simulations of the energy loss of ions at the stopping-power maximum in a laser-induced plasma. Journal of Physics: Conference Series, 2016, 688, 012009.	0.4	1
182	Backreflection diagnostics for ultra-intense laser plasma experiments based on frequency resolved optical gating. Review of Scientific Instruments, 2017, 88, 023503.	1.3	1
183	Multiframe Interferometry Diagnostic for Time and Space Resolved Free Electron Density Determination in Laser Heated Plasma. The Open Plasma Physics Journal, 2014, 3, 116-121.	0.7	1
184	Towards a Laser-driven polarized ^{3}He Ion Beam Source. , 2016, , .		1
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