Zheng Gong

List of Publications by Year
in descending order

61 papers	2,415 citations	279798 23 h-index	206112 48 g-index
62 all docs	62 docs citations	62 times ranked	1146 citing authors

#	ARTICLE	IF	CITATIONS
1	Radiation-Pressure Acceleration of Ion Beams Driven by Circularly Polarized Laser Pulses. Physical Review Letters, 2009, 103, 245003.	7.8	421
2	Generating High-Current Monoenergetic Proton Beams by a CircularlyPolarized Laser Pulse in the Phase-StableAcceleration Regime. Physical Review Letters, 2008, 100, 135003.	7.8	386
3	Ion Acceleration Using Relativistic Pulse Shaping in Near-Critical-Density Plasmas. Physical Review Letters, 2015, 115, 064801.	7.8	168
4	Self-Organizing GeV, Nanocoulomb, Collimated Proton Beam from Laser Foil Interaction at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>7</mml:mn><mml:mo>Ã—</mml:mo><mml:msup><mml:mn>10</mml:mn><mml:mn>21</mml:mn></mml: mathvariant="bold">W</mml:mi><mml:mo>/</mml:mo><mml:msup><mml:mi>cm</mml:mi><mml:mn>2</mml:mn></mml:msup></mm Physical Review Letters, 2009, 103, 135001.	7.8	111
5	Laser Shaping of a Relativistic Intense, Short Gaussian Pulse by a Plasma Lens. Physical Review Letters, 2011, 107, 265002.	7.8	111
6	Laser mode effects on the ion acceleration during circularly polarized laser pulse interaction with foil targets. Physics of Plasmas, 2008, 15, .	1.9	86
7	Laser Acceleration of Highly Energetic Carbon Ions Using a Double-Layer Target Composed of Slightly Underdense Plasma and Ultrathin Foil. Physical Review Letters, 2019, 122, 014803.	7.8	84
8	Generating Overcritical Dense Relativistic Electron Beams via Self-Matching Resonance Acceleration. Physical Review Letters, 2013, 110, 045002.	7.8	77
9	Enhanced Laser-Driven Ion Acceleration by Superponderomotive Electrons Generated from Near-Critical-Density Plasma. Physical Review Letters, 2018, 120, 074801.	7.8	63
10	Power Scaling for Collimated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Î³</mml:mi></mml:math> -Ray Beams Generated by Structured Laser-Irradiated Targets and Its Application to Two-Photon Pair Production. Physical Review Applied, 2020, 13, .	3.8	45
11	Creation of Electron-Positron Pairs in Photon-Photon Collisions Driven by 10-PW Laser Pulses. Physical Review Letters, 2019, 122, 014802.	7.8	43
12	Theory of laser ion acceleration from a foil target of nanometer thickness. Applied Physics B: Lasers and Optics, 2010, 98, 711-721.	2.2	42
13	Brilliant petawatt gamma-ray pulse generation in quantum electrodynamic laser-plasma interaction. Scientific Reports, 2017, 7, 45031.	3.3	40
14	Efficient and stable proton acceleration by irradiating a two-layer target with a linearly polarized laser pulse. Physics of Plasmas, 2013, 20, .	1.9	35
15	Generation of overdense and high-energy electron-positron-pair plasmas by irradiation of a thin foil with two ultraintense lasers. Physical Review E, 2015, 92, 053107.	2.1	35
16	Cascaded generation of isolated sub-10 attosecond half-cycle pulses. New Journal of Physics, 2021, 23, 053003.	2.9	34
17	High-efficiency<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math>-ray flash generation via multiple-laser scattering in ponderomotive potential well. Physical Review E, 2017, 95, 013210.	2.1	32
18	Proton acceleration by single-cycle laser pulses offers a novel monoenergetic and stable operating regime. Physics of Plasmas, 2016, 23, 043112.	1.9	29

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19	Quasi-monoenergetic ion beam acceleration by laser-driven shock and solitary waves in near-critical plasmas. Physics of Plasmas, 2016, 23, 073118.	1.9	28
20	Brilliant GeV gamma-ray flash from inverse Compton scattering in the QED regime. Plasma Physics and Controlled Fusion, 2018, 60, 044004.	2.1	28
21	Quasimonoenergetic electron beam and brilliant gamma-ray radiation generated from near critical density plasma due to relativistic resonant phase locking. Physics of Plasmas, 2015, 22, .	1.9	27
22	Direct laser acceleration of electrons assisted by strong laser-driven azimuthal plasma magnetic fields. Physical Review E, 2020, 102, 013206.	2.1	27
23	Self-induced magnetic focusing of proton beams by Weibel-like instability in the laser foil-plasma interactions. Physics of Plasmas, 2009, 16, .	1.9	26
24	Super-Heavy Ions Acceleration Driven by Ultrashort Laser Pulses at Ultrahigh Intensity. Physical Review X, 2021, 11, .	8.9	23
25	Bright Subcycle Extreme Ultraviolet Bursts from a Single Dense Relativistic Electron Sheet. Physical Review Letters, 2014, 113, 235002.	7.8	22
26	Transmutation prospect of long-lived nuclear waste induced by high-charge electron beam from laser plasma accelerator. Physics of Plasmas, 2017, 24, .	1.9	22
27	Towards the optimisation of direct laser acceleration. New Journal of Physics, 2021, 23, 023031.	2.9	22
28	Detection and analysis of laser driven proton beams by calibrated Gafchromic HD-V2 and MD-V3 radiochromic films. Review of Scientific Instruments, 2019, 90, 033306.	1.3	21
29	Charged particle dynamics in multiple colliding electromagnetic waves. Survey of random walk, LÃ©vy flights, limit circles, attractors and structurally determinate patterns. Journal of Plasma Physics, 2017, 83, .	2.1	20
30	The generation of collimated <i>Î³</i>-ray pulse from the interaction between 10 PW laser and a narrow tube target. Applied Physics Letters, 2018, 112, .	3.3	19
31	Radiation reaction as an energy enhancement mechanism for laser-irradiated electrons in a strong plasma magnetic field. Scientific Reports, 2019, 9, 17181.	3.3	18
32	On the small divergence of laser-driven ion beams from nanometer thick foils. Physics of Plasmas, 2013, 20, .	1.9	17
33	Signatures of quantum radiation reaction in laser-electron-beam collisions. Physics of Plasmas, 2015, 22, 093103.	1.9	16
34	Enhanced laser proton acceleration by target ablation on a femtosecond laser system. Physics of Plasmas, 2018, 25, 063109.	1.9	16
35	Highly collimated electron acceleration by longitudinal laser fields in a hollow-core target. Plasma Physics and Controlled Fusion, 2019, 61, 035012.	2.1	16
36	Terahertz radiation enhanced by target ablation during the interaction of high intensity laser pulse and micron-thickness metal foil. Physics of Plasmas, 2020, 27, .	1.9	16

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37	Radiation reaction induced spiral attractors in ultra-intense colliding laser beams. Matter and Radiation at Extremes, 2016, 1, 308-315.	3.9	15
38	Energy gain by laser-accelerated electrons in a strong magnetic field. Physical Review E, 2020, 101, 043201.	2.1	15
39	Retrieving Transient Magnetic Fields of Ultrarelativistic Laser Plasma via Ejected Electron Polarization. Physical Review Letters, 2021, 127, 165002.	7.8	15
40	Ion acceleration enhanced by target ablation. Physics of Plasmas, 2015, 22, .	1.9	14
41	Radiative polarization dynamics of relativistic electrons in an intense electromagnetic field. Physical Review A, 2021, 103, .	2.5	13
42	Demonstration of tailored energy deposition in a laser proton accelerator. Physical Review Accelerators and Beams, 2020, 23, .	1.6	13
43	Enhanced proton acceleration from an ultrathin target irradiated by laser pulses with plateau ASE. Scientific Reports, 2018, 8, 2536.	3.3	12
44	New injection and acceleration scheme of positrons in the laser-plasma bubble regime. Physical Review Accelerators and Beams, 2020, 23, .	1.6	10
45	Impact of ion dynamics on laser-driven electron acceleration and gamma-ray emission in structured targets at ultra-high laser intensities. Plasma Physics and Controlled Fusion, 2019, 61, 084004.	2.1	9
46	Energetic spin-polarized proton beams from two-stage coherent acceleration in laser-driven plasma. Physical Review E, 2020, 102, 053212.	2.1	9
47	Electron confinement by laser-driven azimuthal magnetic fields during direct laser acceleration. Physics of Plasmas, 2020, 27, .	1.9	7
48	The impact of femtosecond pre-pulses on nanometer thin foils for laser-ion acceleration. Plasma Physics and Controlled Fusion, 2017, 59, 055020.	2.1	6
49	Deflection of a reflected intense circularly polarized light beam induced by asymmetric radiation pressure. Physical Review E, 2019, 100, 063203.	2.1	6
50	Efficiency enhancement of ion acceleration from thin target irradiated by multi-PW few-cycle laser pulses. Physics of Plasmas, 2021, 28, .	1.9	6
51	Influence factors of resolution in laser accelerated proton radiography and image deblurring. AIP Advances, 2021, 11, .	1.3	6
52	Radiation rebound and quantum splash in electron-laser collisions. Physical Review Accelerators and Beams, 2019, 22, .	1.6	6
53	Deciphering <i>in situ</i> electron dynamics of ultrarelativistic plasma via polarization pattern of emitted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>î³</mml:mi></mml:math> -photons. Physical Review Research, 2022, 4, .	3.6	6
54	Stable radiation pressure acceleration of ions by suppressing transverse Rayleigh-Taylor instability with multiple Gaussian pulses. Physics of Plasmas, 2016, 23, 083109.	1.9	5

#	Article	IF	Citations
55	Proton sheet crossing in thin relativistic plasma irradiated by a femtosecond petawatt laser pulse. Physical Review E, 2020, 102, 013207.	2.1	5
56	High-Yield High-Efficiency Positron Generation in High- <i>Z</i> Metal Targets Irradiated by Laser Produced Electrons from Near-Critical Density Plasmas. Chinese Physics Letters, 2017, 34, 085201.	3.3	4
57	Shaping of ion energy spectrum due to ionization in ion acceleration driven by an ultra-short pulse laser. Plasma Physics and Controlled Fusion, 2018, 60, 115007.	2.1	3
58	Ultrahigh brightness attosecond electron beams from intense X-ray laser driven plasma photocathode. International Journal of Modern Physics A, 2019, 34, 1943012.	1.5	2
59	Design of a compact short pulse positron source based on laser plasma accelerators. Physics of Plasmas, 2020, 27, .	1.9	2
60	Emission of electromagnetic waves as a stopping mechanism for nonlinear collisionless ionization waves in a high- Î² regime. Physical Review E, 2021, 103, 023209.	2.1	0
61	Forward sliding-swing acceleration of electrons in combined high-power laser and self-generated mega-tesla magnetic fields (Conference Presentation). , 2019, , .		0