

# Zheng Gong

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5397563/publications.pdf>

Version: 2024-02-01

61  
papers

2,415  
citations

279798

23  
h-index

206112

48  
g-index

62  
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62  
docs citations

62  
times ranked

1146  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deciphering <i>in situ</i> electron dynamics of ultrarelativistic plasma via polarization pattern of emitted $\gamma$ -photons. <i>Physical Review Research</i> , 2022, 4, .	3.6	6
2	Towards the optimisation of direct laser acceleration. <i>New Journal of Physics</i> , 2021, 23, 023031.	2.9	22
3	Emission of electromagnetic waves as a stopping mechanism for nonlinear collisionless ionization waves in a high- $\beta^2$ regime. <i>Physical Review E</i> , 2021, 103, 023209.	2.1	0
4	Efficiency enhancement of ion acceleration from thin target irradiated by multi-PW few-cycle laser pulses. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
5	Radiative polarization dynamics of relativistic electrons in an intense electromagnetic field. <i>Physical Review A</i> , 2021, 103, .	2.5	13
6	Cascaded generation of isolated sub-10 attosecond half-cycle pulses. <i>New Journal of Physics</i> , 2021, 23, 053003.	2.9	34
7	Super-Heavy Ions Acceleration Driven by Ultrashort Laser Pulses at Ultrahigh Intensity. <i>Physical Review X</i> , 2021, 11, .	8.9	23
8	Influence factors of resolution in laser accelerated proton radiography and image deblurring. <i>AIP Advances</i> , 2021, 11, .	1.3	6
9	Retrieving Transient Magnetic Fields of Ultrarelativistic Laser Plasma via Ejected Electron Polarization. <i>Physical Review Letters</i> , 2021, 127, 165002.	7.8	15
10	Design of a compact short pulse positron source based on laser plasma accelerators. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	2
11	Proton sheet crossing in thin relativistic plasma irradiated by a femtosecond petawatt laser pulse. <i>Physical Review E</i> , 2020, 102, 013207.	2.1	5
12	Direct laser acceleration of electrons assisted by strong laser-driven azimuthal plasma magnetic fields. <i>Physical Review E</i> , 2020, 102, 013206.	2.1	27
13	Energetic spin-polarized proton beams from two-stage coherent acceleration in laser-driven plasma. <i>Physical Review E</i> , 2020, 102, 053212.	2.1	9
14	Power Scaling for Collimated $\gamma$ -Ray Beams Generated by Structured Laser-Irradiated Targets and Its Application to Two-Photon Pair Production. <i>Physical Review Applied</i> , 2020, 13, .	3.8	45
15	Electron confinement by laser-driven azimuthal magnetic fields during direct laser acceleration. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
16	Terahertz radiation enhanced by target ablation during the interaction of high intensity laser pulse and micron-thickness metal foil. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	16
17	Energy gain by laser-accelerated electrons in a strong magnetic field. <i>Physical Review E</i> , 2020, 101, 043201.	2.1	15
18	Demonstration of tailored energy deposition in a laser proton accelerator. <i>Physical Review Accelerators and Beams</i> , 2020, 23, .	1.6	13

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19	New injection and acceleration scheme of positrons in the laser-plasma bubble regime. <i>Physical Review Accelerators and Beams</i> , 2020, 23, .	1.6	10
20	Impact of ion dynamics on laser-driven electron acceleration and gamma-ray emission in structured targets at ultra-high laser intensities. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 084004.	2.1	9
21	Detection and analysis of laser driven proton beams by calibrated Gafchromic HD-V2 and MD-V3 radiochromic films. <i>Review of Scientific Instruments</i> , 2019, 90, 033306.	1.3	21
22	Ultrahigh brightness attosecond electron beams from intense X-ray laser driven plasma photocathode. <i>International Journal of Modern Physics A</i> , 2019, 34, 1943012.	1.5	2
23	Deflection of a reflected intense circularly polarized light beam induced by asymmetric radiation pressure. <i>Physical Review E</i> , 2019, 100, 063203.	2.1	6
24	Radiation reaction as an energy enhancement mechanism for laser-irradiated electrons in a strong plasma magnetic field. <i>Scientific Reports</i> , 2019, 9, 17181.	3.3	18
25	Highly collimated electron acceleration by longitudinal laser fields in a hollow-core target. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 035012.	2.1	16
26	Creation of Electron-Positron Pairs in Photon-Photon Collisions Driven by 10-PW Laser Pulses. <i>Physical Review Letters</i> , 2019, 122, 014802.	7.8	43
27	Laser Acceleration of Highly Energetic Carbon Ions Using a Double-Layer Target Composed of Slightly Underdense Plasma and Ultrathin Foil. <i>Physical Review Letters</i> , 2019, 122, 014803.	7.8	84
28	Radiation rebound and quantum splash in electron-laser collisions. <i>Physical Review Accelerators and Beams</i> , 2019, 22, .	1.6	6
29	Forward sliding-swing acceleration of electrons in combined high-power laser and self-generated mega-tesla magnetic fields (Conference Presentation). , 2019, , .		0
30	Enhanced Laser-Driven Ion Acceleration by Superponderomotive Electrons Generated from Near-Critical-Density Plasma. <i>Physical Review Letters</i> , 2018, 120, 074801.	7.8	63
31	Enhanced proton acceleration from an ultrathin target irradiated by laser pulses with plateau ASE. <i>Scientific Reports</i> , 2018, 8, 2536.	3.3	12
32	Brilliant GeV gamma-ray flash from inverse Compton scattering in the QED regime. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 044004.	2.1	28
33	Shaping of ion energy spectrum due to ionization in ion acceleration driven by an ultra-short pulse laser. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 115007.	2.1	3
34	The generation of collimated $\gamma$ -ray pulse from the interaction between 10 PW laser and a narrow tube target. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	19
35	Enhanced laser proton acceleration by target ablation on a femtosecond laser system. <i>Physics of Plasmas</i> , 2018, 25, 063109.	1.9	16
36	High-efficiency $\gamma$ -ray flash generation via multiple-laser scattering in ponderomotive potential well. <i>Physical Review E</i> , 2017, 95, 013210.	2.1	32

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37	Charged particle dynamics in multiple colliding electromagnetic waves. Survey of random walk, Lévy flights, limit circles, attractors and structurally determinate patterns. Journal of Plasma Physics, 2017, 83, .	2.1	20
38	Brilliant petawatt gamma-ray pulse generation in quantum electrodynamic laser-plasma interaction. Scientific Reports, 2017, 7, 45031.	3.3	40
39	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
40	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
41	High-Yield High-Efficiency Positron Generation in High- $Z$ Metal Targets Irradiated by Laser Produced Electrons from Near-Critical Density Plasmas. Chinese Physics Letters, 2017, 34, 085201.	3.3	4
42	Radiation reaction induced spiral attractors in ultra-intense colliding laser beams. Matter and Radiation at Extremes, 2016, 1, 308-315.	3.9	15
43	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
44	Proton acceleration by single-cycle laser pulses offers a novel monoenergetic and stable operating regime. Physics of Plasmas, 2016, 23, 043112.	1.9	29
45	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
46	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
47	Signatures of quantum radiation reaction in laser-electron-beam collisions. Physics of Plasmas, 2015, 22, 093103.	1.9	16
48	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
49	Ion Acceleration Using Relativistic Pulse Shaping in Near-Critical-Density Plasmas. Physical Review Letters, 2015, 115, 064801.	7.8	168
50	Ion acceleration enhanced by target ablation. Physics of Plasmas, 2015, 22, .	1.9	14
51	Bright Subcycle Extreme Ultraviolet Bursts from a Single Dense Relativistic Electron Sheet. Physical Review Letters, 2014, 113, 235002.	7.8	22
52	On the small divergence of laser-driven ion beams from nanometer thick foils. Physics of Plasmas, 2013, 20, .	1.9	17
53	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
54	Generating Overcritical Dense Relativistic Electron Beams via Self-Matching Resonance Acceleration. Physical Review Letters, 2013, 110, 045002.	7.8	77

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55	Laser Shaping of a Relativistic Intense, Short Gaussian Pulse by a Plasma Lens. Physical Review Letters, 2011, 107, 265002.	7.8	111
56	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
57	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
58	Self-Organizing GeV, Nanocoulomb, Collimated Proton Beam from Laser Foil Interaction at $\gamma = 7$ and $10$ $\mu\text{m}$ Laser Wavelengths. Physical Review Letters, 2009, 103, 135001.		
59	Radiation-Pressure Acceleration of Ion Beams Driven by Circularly Polarized Laser Pulses. Physical Review Letters, 2009, 103, 245003.	7.8	421
60	Generating High-Current Monoenergetic Proton Beams by a Circularly Polarized Laser Pulse in the Phase-Stable Acceleration Regime. Physical Review Letters, 2008, 100, 135003.	7.8	386
61	Laser mode effects on the ion acceleration during circularly polarized laser pulse interaction with foil targets. Physics of Plasmas, 2008, 15, .	1.9	86