

Arie Zigler

List of Publications by Year in descending order

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111
papers

3,032
citations

159358

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189595

50
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111
all docs

111
docs citations

111
times ranked

1820
citing authors

#	ARTICLE	IF	CITATIONS
1	Advanced Stabilization Methods of Plasma Devices for Plasma-Based Acceleration. <i>Symmetry</i> , 2022, 14, 450.	1.1	2
2	Energy spread minimization in a beam-driven plasma wakefield accelerator. <i>Nature Physics</i> , 2021, 17, 499-503.	6.5	30
3	Control of amorphous solid water target morphology induced by deposition on a charged surface. <i>High Power Laser Science and Engineering</i> , 2021, 9, .	2.0	3
4	Low jitter parabolic profile low density plasma channel in 3D printed gas filled capillary. <i>Plasma Research Express</i> , 2021, 3, 025014.	0.4	0
5	Simultaneous observation of ultrafast electron and proton beams in TNSA. <i>High Power Laser Science and Engineering</i> , 2020, 8, .	2.0	6
6	Temporal contrast enhancement of ultrashort pulses using a spatiotemporal plasma-lens filter. <i>Optics Letters</i> , 2020, 45, 2279.	1.7	5
7	Simultaneous length extension and temporal prolongation of high-density plasma filaments generated by a femtosecond laser in the air. <i>OSA Continuum</i> , 2020, 3, 267.	1.8	0
8	Review on TNSA diagnostics and recent developments at SPARC_LAB. <i>High Power Laser Science and Engineering</i> , 2019, 7, .	2.0	4
9	Towards Remote Lightning Manipulation by Meters-long Plasma Channels Generated by Ultra-Short-Pulse High-Intensity Lasers. <i>Scientific Reports</i> , 2019, 9, 407.	1.6	8
10	Longitudinal Phase-Space Manipulation with Beam-Driven Plasma Wakefields. <i>Physical Review Letters</i> , 2019, 122, 114801.	2.9	41
11	Focusing of High-Brightness Electron Beams with Active-Plasma Lenses. <i>Physical Review Letters</i> , 2018, 121, 174801.	2.9	39
12	Experimental characterization of active plasma lensing for electron beams. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	42
13	Experimental characterization of the effects induced by passive plasma lens on high brightness electron bunches. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	29
14	Novel Single-Shot Diagnostics for Electrons from Laser-Plasma Interaction at SPARC_LAB. <i>Quantum Beam Science</i> , 2017, 1, 13.	0.6	14
15	Nonlinear Compton scattering in a strong rotating electric field. <i>Physical Review A</i> , 2016, 94, .	1.0	12
16	Atomic kinetics of matter irradiated by intense laser fields. <i>Physical Review E</i> , 2016, 94, 033209.	0.8	0
17	Scleral Cross-linking Using Riboflavin and Ultraviolet-A Radiation for Prevention of Axial Myopia in a Rabbit Model. <i>Journal of Visualized Experiments</i> , 2016, , e53201.	0.2	14
18	Influence of atomic modeling on integrated simulations of laser-produced Au plasmas. <i>Physical Review E</i> , 2015, 92, 053111.	0.8	4

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19	Proton Acceleration by Ultrashort Intense Laser Interaction with Microstructured Snow Targets. Applied Sciences (Switzerland), 2015, 5, 459-471.	1.3	2
20	The Lagrangian formulation of strong-field quantum electrodynamics in a plasma. Physics of Plasmas, 2014, 21, 053103.	0.7	14
21	Extended lifetime of high density plasma filament generated by a dual femtosecond/nanosecond laser pulse in air. New Journal of Physics, 2014, 16, 123046.	1.2	37
22	Scleral cross-linking using riboflavin and ultraviolet-A radiation for prevention of progressive myopia in a rabbit model. Experimental Eye Research, 2014, 127, 190-195.	1.2	41
23	Temporal evolution of femtosecond laser induced plasma filament in air and N2. Applied Physics Letters, 2013, 103, .	1.5	18
24	Enhanced Proton Acceleration by an Ultrashort Laser Interaction with Structured Dynamic Plasma Targets. Physical Review Letters, 2013, 110, 215004.	2.9	69
25	Generation of hard x rays by femtosecond laser pulse interaction with solid targets in atmosphere. Optics Letters, 2012, 37, 884.	1.7	4
26	5.5-7.5 MeV Proton Generation by a Moderate-Intensity Ultrashort-Pulse Laser Interaction with H_2O Nanowire Targets. Physical Review Letters, 2011, 106, 134801.	2.9	39
27	Plasma structures for quasiphase matched high harmonic generation. Applied Physics Letters, 2011, 98, 141110.	1.5	29
28	Generation of fast protons by interaction of modest laser intensities with H ₂ O nano-wire targets. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 653, 156-158.	0.7	1
29	Microwave diagnostics of femtosecond laser-generated plasma filaments. Applied Physics Letters, 2011, 99, .	1.5	29
30	Micro-radiography with laser plasma X-ray source operating in air atmosphere. Laser and Particle Beams, 2010, 28, 393-397.	0.4	14
31	THz generation in a photo-activated periodically-biased semiconductor. , 2010, , .		0
32	Guiding and Ionization Blueshift in Ablative Capillary Waveguide Accelerators. , 2009, , .		0
33	Guiding of 35 TW laser pulses in ablative capillary discharge waveguides. Physics of Plasmas, 2009, 16, 113105.	0.7	23
34	A plasma microlens for ultrashort high power lasers. Applied Physics Letters, 2009, 95, 031101.	1.5	12
35	Using the self-filtering property of a femtosecond filament to improve second harmonic generation. Optics Express, 2009, 17, 6451.	1.7	2
36	Generation of controlled radiation sources in the atmosphere using a dual femtosecond /nanosecond laser pulse. Journal of Applied Physics, 2008, 103, .	1.1	43

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37	Effect of an Energy Reservoir on the Atmospheric Propagation of Laser-Plasma Filaments. Physical Review Letters, 2008, 100, 155003.	2.9	32
38	Extending Femtosecond Filamentation of High Power Laser Propagating in the Atmosphere. AIP Conference Proceedings, 2008, , .	0.3	0
39	Interaction of high power laser with snow nanotubes. , 2008, , .		0
40	The fine structure of a laser-plasma filament in air. , 2008, , .		0
41	Control of the filamentation distance and pattern in long range atmospheric propagation. , 2007, , NWB2.		0
42	Generation of fast ions by an efficient coupling of high power laser into snow nanotubes. Applied Physics Letters, 2007, 91, 251501.	1.5	10
43	Control of the filamentation distance and pattern in long-range atmospheric propagation. Optics Express, 2007, 15, 2779.	1.7	27
44	Fine Structure of a Laser-Plasma Filament in Air. Physical Review Letters, 2007, 98, 155002.	2.9	44
45	Control of the collapse distance in atmospheric propagation. Optics Express, 2006, 14, 4946.	1.7	45
46	Tunable, high peak power terahertz radiation from optical rectification of a short modulated laser pulse. Optics Express, 2006, 14, 6813.	1.7	7
47	Generation of a high-energy ultra wideband chirped source in periodically poled crystals. , 2006, , .		0
48	Autoresonant excitation and control of molecular degrees of freedom in three dimensions. Physical Review A, 2005, 72, .	1.0	8
49	Reduction of damage threshold in dielectric materials induced by negatively chirped laser pulses. Applied Physics Letters, 2005, 87, 241903.	1.5	37
50	First demonstration of a staged all-optical laser wakefield acceleration. Physics of Plasmas, 2005, 12, 100702.	0.7	27
51	Longitudinal profiles of plasma parameters in a laser-ignited capillary discharge and implications for laser wakefield accelerator applications. Applied Physics Letters, 2005, 87, 261501.	1.5	15
52	Trapping and acceleration of nonideal injected electron bunches in laser Wakefield accelerators. IEEE Transactions on Plasma Science, 2005, 33, 712-722.	0.6	14
53	Generation of a high-energy ultrawideband chirped source in periodically poled LiTaO3. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 620.	0.9	16
54	Self-focusing Distance of Very High Power Laser Pulses. Optics Express, 2005, 13, 5897.	1.7	73

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55	Enhancement of a 2477-nm line emitted by the plasma of a boron nitride capillary discharge irradiated by a high-intensity ultrashort laser pulse. <i>Optics Letters</i> , 2005, 30, 1572.	1.7	4
56	Control of multiple filamentation in air. <i>Optics Letters</i> , 2004, 29, 1772.	1.7	141
57	Low jitter capillary discharge channels. <i>Applied Physics Letters</i> , 2003, 83, 2961-2963.	1.5	13
58	Transmission of high-power CO ₂ laser pulses through a plasma channel. <i>Applied Physics Letters</i> , 2003, 83, 3459-3461.	1.5	10
59	GeV acceleration in tapered plasma channels. <i>Physics of Plasmas</i> , 2002, 9, 2364-2370.	0.7	40
60	High intensity focusing of laser pulses using a short plasma channel lens. <i>Physics of Plasmas</i> , 2002, 9, 1431-1442.	0.7	21
61	Characterization of the electrical properties and thickness of thin epitaxial semiconductor layers by THz reflection spectroscopy. <i>Journal of Applied Physics</i> , 2001, 90, 5778-5781.	1.1	47
62	Velocity control and staging in laser wakefield accelerators using segmented capillary discharges. <i>Applied Physics Letters</i> , 2001, 78, 3175-3177.	1.5	24
63	Shadow monochromatic backlighting: Large-field high resolution X-ray shadowgraphy with improved spectral tunability. <i>Laser and Particle Beams</i> , 2001, 19, 285-293.	0.4	27
64	Conversion of Electrostatic to Electromagnetic Waves by Superluminous Ionization Fronts. <i>Physical Review Letters</i> , 2001, 86, 2806-2809.	2.9	55
65	Stable Laser-Pulse Propagation in Plasma Channels for GeV Electron Acceleration. <i>Physical Review Letters</i> , 2000, 85, 5110-5113.	2.9	57
66	High efficiency guiding of terawatt subpicosecond laser pulses in a capillary discharge plasma channel. <i>Physical Review E</i> , 1999, 59, R4769-R4772.	0.8	71
67	Variable profile capillary discharge for improved phase matching in a laser wakefield accelerator. <i>Applied Physics Letters</i> , 1999, 75, 772-774.	1.5	57
68	Collimation of plasma-produced x-rays by spherical crystals: Ray-tracing simulations and experimental results. <i>Review of Scientific Instruments</i> , 1999, 70, 1614-1620.	0.6	10
69	Generation of tunable far-infrared radiation by the interaction of a superluminous ionizing front with an electrically biased photoconductor. <i>Applied Physics Letters</i> , 1999, 74, 1669-1671.	1.5	40
70	Is efficiency of gain generation in Li III 13.5-nm laser with 0.25-fs subpicosecond pulses the same as with 1-fs? <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 1999, 5, 1453-1459.	1.9	18
71	Generation of tunable bandwidth-controllable terahertz radiation. , 1999, 3795, 477.		0
72	Comparing efficiency of gain generation in Li III 13.5-nm laser with 0.25-fs and 1-fs subpicosecond pumping pulses. , 1999, , .		2

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73	The inverse Faraday effect in plasma produced by circularly polarized laser light in the range of intensities 10^9 – 10^{14} W/cm ² . Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 246, 329-334.	0.9	25
74	X-Ray Spectrum Emitted by Laser-Produced Barium Plasma in the 8 to 13.5 Å... Wavelength Range. Physica Scripta, 1998, 58, 19-24.	1.2	22
75	High-resolution x-ray spectrum of a laser-produced barium plasma in the 9.10–9.36-Å... wavelength range. Physical Review A, 1998, 58, 1859-1866.	1.0	22
76	Investigations of double capillary discharge scheme for production of wave guide in plasma. Applied Physics Letters, 1997, 71, 2925-2927.	1.5	45
77	Inner-shell satellite transitions in dense short pulse plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 58, 859-878.	1.1	44
78	Guiding of High Intensity Laser Pulses in Straight and Curved Plasma Channel Experiments. Physical Review Letters, 1996, 77, 4186-4189.	2.9	295
79	Analysis of the x-ray spectra emitted by laser-produced plasma of highly ionized lanthanum and praseodymium in the 8.4 to 12.0 Å... wavelength range. Physica Scripta, 1994, 50, 61-67.	1.2	18
80	Increase of multilayer x-ray reflectivity induced by pulsed laser heating. Journal of Applied Physics, 1994, 75, 8085-8089.	1.1	3
81	X-ray emission from a 650-fs laser-produced barium plasma. Physical Review E, 1993, 47, 4349-4353.	0.8	14
82	Observation of density-enhanced dielectronic satellite spectra produced during subpicosecond laser-matter interactions. Physical Review A, 1992, 45, 1569-1574.	1.0	24
83	<title>Studies of plasmas excited by intense subpicosecond radiation for x-ray generation (Review) Tj ETQq1 1 0.784314 rgBT ₀ /Overlo		
84	Laser frequency bandwidth narrowing by photorefractive two-beam coupling. Optics Letters, 1992, 17, 481.	1.7	5
85	Plasma production from ultraviolet-transmitting targets using subpicosecond ultraviolet radiation. Optics Letters, 1991, 16, 1261.	1.7	25
86	Distinct features of double phase conjugation in photorefractive semi-insulating GaAs. Optics Communications, 1991, 84, 104-108.	1.0	1
87	High intensity generation of 9–13 Å... x-rays from BaF ₂ targets. Applied Physics Letters, 1991, 59, 777-778.	1.5	20
88	Measurement of energy penetration depth of subpicosecond laser energy into solid density matter. Applied Physics Letters, 1991, 59, 534-536.	1.5	32
89	Elimination of laser prepulse by relativistic guiding in a plasma. Applied Physics Letters, 1991, 58, 346-348.	1.5	28
90	High-gain photorefractive two-beam coupling in semi-insulating GaAs with pump-controlled suppression of the Schottky barrier. Applied Physics Letters, 1990, 57, 422-424.	1.5	3

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91	Misalignment sensitivity of beam combining by stimulated Brillouin scattering. Optics Letters, 1990, 15, 469.	1.7	17
92	Coherent beam and image amplification by Brillouin two-beam coupling in CS ₂ . Optics Letters, 1990, 15, 616.	1.7	15
93	Super-transition-arrays: A model for the spectral analysis of hot, dense plasma. Physical Review A, 1989, 40, 3183-3193.	1.0	345
94	Imaging of laser-produced plasmas at 44 Å... using a multilayer mirror. Optics Communications, 1988, 68, 190-195.	1.0	15
95	Gain predictions for nickel-like gadolinium from a 181-level multiconfigurational distorted-wave collisional-radiative model. Physical Review A, 1988, 38, 1797-1804.	1.0	55
96	Electron-density dependence of line intensities of Cu-like Sm ³³⁺ to Yb ⁴¹⁺ emitted from tokamak and laser-produced plasmas. Physical Review A, 1988, 38, 288-295.	1.0	15
97	Temporally resolved target potential measurements in laser-target interactions. Journal Physics D: Applied Physics, 1987, 20, 210-214.	1.3	17
98	Use of unresolved transition arrays for plasma diagnostics. Physical Review A, 1987, 35, 280-285.	1.0	19
99	Elongated high-temperature, dense plasma produced by a high-power-laser heating of a capillary discharge. Physical Review A, 1987, 35, 4446-4448.	1.0	20
100	Interpretation of laser produced Au and W X-ray spectra in the 3 keV range. Physics Letters, Section A: General, Atomic and Solid State Physics, 1986, 117, 31-35.	0.9	20
101	The Unresolved 3d-4f Transitions in the X-ray Spectra of Highly Ionized Tm to Re from Laser Produced Plasma. Physica Scripta, 1986, 34, 51-57.	1.2	33
102	Classification of X-Ray Spectra from Laser Produced Plasmas of Atoms from Tm to Pt in the Range 6-9 Å... Physica Scripta, 1983, 27, 39-53.	1.2	45
103	Interpretation of unresolved transition arrays in the soft-x-ray spectra of highly ionized molybdenum and palladium. Physical Review A, 1982, 25, 2391-2394.	1.0	34
104	Temporal pulse-shaping for laser-fusion experiments using a cavity-dumped O-switched oscillator. Journal of Physics E: Scientific Instruments, 1982, 15, 255-259.	0.7	13
105	Effect of ponderomotive forces on wave dispersion and second-harmonic light emissions in laser-produced plasmas. Physical Review A, 1981, 24, 1601-1608.	1.0	27
106	Nickel-like spectrum of platinum emitted from a laser-produced plasma. Physics Letters, Section A: General, Atomic and Solid State Physics, 1980, 75, 343-344.	0.9	19
107	Nickel-like spectra of Tm XLII and Yb XLIII from laser produced plasma. Physics Letters, Section A: General, Atomic and Solid State Physics, 1980, 79, 67-70.	0.9	21
108	Burn-through of thin aluminum foils by laser-driven ablation. Journal of Applied Physics, 1979, 50, 6817-6821.	1.1	18

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109	Spatial resolution of X-ray line emission in laser produced plasma by shadow techniques. Physics Letters, Section A: General, Atomic and Solid State Physics, 1977, 60, 319-322.	0.9	17
110	The origin of $K\alpha$ radiation in laser-produced aluminum plasma. Physics Letters, Section A: General, Atomic and Solid State Physics, 1977, 63, 275-278.	0.9	16
111	Gas-filled capillary-discharge stabilization for plasma-based accelerators by means of a laser pulse. Plasma Physics and Controlled Fusion, 0, , .	0.9	3