

Andreas Kemp

List of Publications by Year in descending order

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Version: 2024-02-01

45
papers

2,101
citations

331670

21
h-index

233421

45
g-index

48
all docs

48
docs citations

48
times ranked

1428
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultralow Emittance, Multi-MeV Proton Beams from a Laser Virtual-Cathode Plasma Accelerator. Physical Review Letters, 2004, 92, 204801.	7.8	494
2	High energy proton acceleration in interaction of short laser pulse with dense plasma target. Physics of Plasmas, 2003, 10, 2009-2015.	1.9	257
3	Absorption of Short Laser Pulses on Solid Targets in the Ultrarelativistic Regime. Physical Review Letters, 2008, 100, 085004.	7.8	172
4	Spatial Uniformity of Laser-Accelerated Ultrahigh-Current MeV Electron Propagation in Metals and Insulators. Physical Review Letters, 2003, 91, 255002.	7.8	166
5	Limitation on Prepulse Level for Cone-Guided Fast-Ignition Inertial Confinement Fusion. Physical Review Letters, 2010, 104, 055002.	7.8	101
6	Collisional Relaxation of Superthermal Electrons Generated by Relativistic Laser Pulses in Dense Plasma. Physical Review Letters, 2006, 97, 235001.	7.8	93
7	Laser Heating of Solid Matter by Light-Pressure-Driven Shocks at Ultrarelativistic Intensities. Physical Review Letters, 2008, 100, 165002.	7.8	75
8	Stagnation Pressure of Imploding Shells and Ignition Energy Scaling of Inertial Confinement Fusion Targets. Physical Review Letters, 2001, 86, 3336-3339.	7.8	65
9	Interaction Physics of Multipicosecond Petawatt Laser Pulses with Overdense Plasma. Physical Review Letters, 2012, 109, 195005.	7.8	65
10	Hot Electron Temperature and Coupling Efficiency Scaling with Prepulse for Cone-Guided Fast Ignition. Physical Review Letters, 2012, 108, 115004.	7.8	60
11	Hot-electron energy coupling in ultraintense laser-matter interaction. Physical Review E, 2009, 79, 066406.	2.1	56
12	Dynamics of Relativistic Laser-Plasma Interaction on Solid Targets. Physical Review Letters, 2012, 109, 145006.	7.8	40
13	The scaling of electron and positron generation in intense laser-solid interactions. Physics of Plasmas, 2015, 22, .	1.9	37
14	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. Physics of Plasmas, 2019, 26, .	1.9	34
15	Isochoric heating in heterogeneous solid targets with ultrashort laser pulses. Physics of Plasmas, 2007, 14, .	1.9	29
16	High K_{α} x-ray conversion efficiency from extended source gas jet targets irradiated by ultra short laser pulses. Applied Physics Letters, 2008, 92, .	3.3	29
17	Time-Resolved Fuel Density Profiles of the Stagnation Phase of Indirect-Drive Inertial Confinement Implosions. Physical Review Letters, 2020, 125, 155003.	7.8	27
18	Hot electron generation forming a steep interface in superintense laser-matter interaction. Physics of Plasmas, 2009, 16, 112704.	1.9	26

#	ARTICLE	IF	CITATIONS
19	Diagnostics for fast ignition science (invited). Review of Scientific Instruments, 2008, 79, 10F302.	1.3	23
20	Computational modeling of proton acceleration with multi-picosecond and high energy, kilojoule, lasers. Physics of Plasmas, 2018, 25, 083109.	1.9	23
21	Isochoric heating of reduced mass targets by ultra-intense laser produced relativistic electrons. High Energy Density Physics, 2009, 5, 244-248.	1.5	22
22	High contrast Kr gas jet $K\alpha$ x-ray source for high energy density physics experiments. Review of Scientific Instruments, 2008, 79, 10E917.	1.3	21
23	Modeling laser-driven ion acceleration with deep learning. Physics of Plasmas, 2021, 28, .	1.9	19
24	Anomalous inhibition of electron transport in laser-matter interaction at subrelativistic intensities. Physics of Plasmas, 2004, 11, L69-L72.	1.9	18
25	Production of relativistic electrons at subrelativistic laser intensities. Physical Review E, 2020, 101, 031201.	2.1	18
26	Deflection of MeV Electrons by Self-Generated Magnetic Fields in Intense Laser-Solid Interactions. Physical Review Letters, 2013, 111, 245001.	7.8	17
27	Monochromatic 2D $K\alpha$ Emission Images Revealing Short-Pulse Laser Isochoric Heating Mechanism. Physical Review Letters, 2019, 122, 155002.	7.8	16
28	Direct electron acceleration in multi-kilojoule, multi-picosecond laser pulses. Physics of Plasmas, 2020, 27, .	1.9	16
29	Enhancements in laser-generated hot-electron production via focusing cone targets at short pulse and high contrast. Physical Review E, 2021, 103, 053207.	2.1	13
30	Generating keV ion distributions for nuclear reactions at near solid-density using intense short-pulse lasers. Nature Communications, 2019, 10, 4156.	12.8	12
31	What is the surface temperature of a solid irradiated by a Petawatt laser?. Physics of Plasmas, 2016, 23, 090703.	1.9	6
32	The effects of multispecies <i>Hohlraum</i> walls on stimulated Brillouin scattering, <i>Hohlraum</i> dynamics, and beam propagation. Physics of Plasmas, 2021, 28, .	1.9	6
33	Demonstration of TNSA proton radiography on the National Ignition Facility Advanced Radiographic Capability (NIF-ARC) laser. Plasma Physics and Controlled Fusion, 2021, 63, 124006.	2.1	6
34	Enhancement of high energy X-ray radiography using compound parabolic concentrator targets. High Energy Density Physics, 2022, 42, 100978.	1.5	6
35	Kinetic theory of alpha particles production in a dense and strongly magnetized plasma. Physics of Plasmas, 2000, 7, 4515-4533.	1.9	5
36	Conductivities in Hot Aluminium Plasma. Contributions To Plasma Physics, 2001, 41, 3-14.	1.1	4

#	ARTICLE	IF	CITATIONS
37	Characterizing the acceleration time of laser-driven ion acceleration with data-informed neural networks. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 094005.	2.1	4
38	Mapping the ionization state of laser-irradiated Ar gas jets with multiwavelength monochromatic x-ray imaging. <i>Review of Scientific Instruments</i> , 2010, 81, 10E526.	1.3	3
39	Focusing of intense subpicosecond laser pulses in wedge targets. <i>Physics of Plasmas</i> , 2011, 18, 103110.	1.9	3
40	2D monochromatic x-ray imaging for beam monitoring of an x-ray free electron laser and a high-power femtosecond laser. <i>Review of Scientific Instruments</i> , 2021, 92, 013510.	1.3	3
41	Absorption of relativistic multi-picosecond laser pulses in wire arrays. <i>Physics of Plasmas</i> , 2021, 28, 103102.	1.9	3
42	Plasma expansion and relativistic filamentation in intense laser-irradiated cone targets. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	3
43	Impact of field ionization on the velocity of an ionization front induced by an electron beam propagating in a solid insulator. <i>New Journal of Physics</i> , 2006, 8, 134-134.	2.9	2
44	Comment on "In-depth Plasma-Wave Heating of Dense Plasma Irradiated by Short Laser Pulses". <i>Physical Review Letters</i> , 2016, 116, 159501.	7.8	2
45	Efficient ion acceleration by multistaged intense short laser pulses. <i>Physical Review Research</i> , 2022, 4, .	3.6	0