A E Dangor

List of Publications by Year
in descending order

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132 papers	13,284 citations	28190 55 h-index	20900 115 g-index
133 all docs	133 docs citations	133 times ranked	3748 citing authors

#	Article	IF	Citations
1	Monoenergetic beams of relativistic electrons from intense laserâ€“plasma interactions. Nature, 2004, 431, 535-538.	13.7	1,731
2	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. Nature, 2001, 412, 798-802.	13.7	873
3	Electron acceleration from the breaking of relativistic plasma waves. Nature, 1995, 377, 606-608.	13.7	750
4	Measurements of Energetic Proton Transport through Magnetized Plasma from Intense Laser Interactions with Solids. Physical Review Letters, 2000, 84, 670-673.	2.9	664
5	A study of picosecond laserâ€“solid interactions up to 1019 Wâ€‰cmâ^'2. Physics of Plasmas, 1997, 4, 447-457.	0.7	583
6	Electron Acceleration by a Wake Field Forced by an Intense Ultrashort Laser Pulse. Science, 2002, 298, 1596-1600.	6.0	566
7	Energetic Heavy-Ion and Proton Generation from Ultraintense Laser-Plasma Interactions with Solids. Physical Review Letters, 2000, 85, 1654-1657.	2.9	470
8	Efficient Extreme UV Harmonics Generated from Picosecond Laser Pulse Interactions with Solid Targets. Physical Review Letters, 1996, 76, 1832-1835.	2.9	302
9	Effect of discrete wires on the implosion dynamics of wire array Z pinches. Physics of Plasmas, 2001, 8, 3734-3747.	0.7	300
10	Photonuclear Physics when a Multiterawatt Laser Pulse Interacts with Solid Targets. Physical Review Letters, 2000, 84, 899-902.	2.9	234
11	Magnetic Reconnection and Plasma Dynamics in Two-Beam Laser-Solid Interactions. Physical Review Letters, 2006, 97, 255001.	2.9	220
12	Observation of a highly directional Î³-ray beam from ultrashort, ultraintense laser pulse interactions with solids. Physics of Plasmas, 1999, 6, 2150-2156.	0.7	197
13	Effect of the Plasma Density Scale Length on the Direction of Fast Electrons in Relativistic Laser-Solid Interactions. Physical Review Letters, 2000, 84, 1459-1462.	2.9	197
14	Observation of Electron Energies Beyond the Linear Dephasing Limit from a Laser-Excited Relativistic Plasma Wave. Physical Review Letters, 1998, 80, 2133-2136.	2.9	195
15	Plasma Ion Emission from High Intensity Picosecond Laser Pulse Interactions with Solid Targets. Physical Review Letters, 1994, 73, 1801-1804.	2.9	191
16	Observation of Synchrotron Radiation from Electrons Accelerated in a Petawatt-Laser-Generated Plasma Cavity. Physical Review Letters, 2008, 100, 105006.	2.9	179
17	Measuring huge magnetic fields. Nature, 2002, 415, 280-280.	13.7	176
18	Laboratory measurements of0.7GGmagnetic fields generated during high-intensity laser interactions with dense plasmas. Physical Review E, 2004, 70, 026401.	0.8	173

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19	Proton Acceleration from High-Intensity Laser Interactions with Thin Foil Targets. Physical Review Letters, 2003, 90, 064801.	2.9	161
20	Collimated Multi-MeV Ion Beams from High-Intensity Laser Interactions with Underdense Plasma. Physical Review Letters, 2006, 96, 245002.	2.9	155
21	Multi-MeV Ion Production from High-Intensity Laser Interactions with Underdense Plasmas. Physical Review Letters, 1999, 83, 737-740.	2.9	153
22	Neutron production from picosecond laser irradiation of deuterated targets at intensities of. Plasma Physics and Controlled Fusion, 1998, 40, 175-182.	0.9	148
23	A high impedance megaâ€ampere generator for fiber zâ€pinch experiments. Review of Scientific Instruments, 1996, 67, 1533-1541.	0.6	147
24	Electron Acceleration in Cavitated Channels Formed by a Petawatt Laser in Low-Density Plasma. Physical Review Letters, 2005, 94, .	2.9	147
25	Production of radioactive nuclides by energetic protons generated from intense laser-plasma interactions. Applied Physics Letters, 2001, 78, 19-21.	1.5	142
26	Effect of Core-Corona Plasma Structure on Seeding of Instabilities in Wire ArrayZPinches. Physical Review Letters, 2000, 85, 98-101.	2.9	137
27	Role of the plasma scale length in the harmonic generation from solid targets. Physical Review E, 1998, 58, R5253-R5256.	0.8	135
28	Ion Acceleration by Collisionless Shocks in High-Intensity-Laserâ€“Underdense-Plasma Interaction. Physical Review Letters, 2004, 93, 155003.	2.9	132
29	Plasma Formation on the Front and Rear of Plastic Targets due to High-Intensity Laser-Generated Fast Electrons. Physical Review Letters, 1998, 81, 999-1002.	2.9	127
30	Propagation Instabilities of High-Intensity Laser-Produced Electron Beams. Physical Review Letters, 2003, 90, 175001.	2.9	125
31	Characterization of a gamma-ray source based on a laser-plasma accelerator with applications to radiography. Applied Physics Letters, 2002, 80, 2129-2131.	1.5	124
32	Energetic proton production from relativistic laser interaction with high density plasmas. Physics of Plasmas, 2000, 7, 2055-2061.	0.7	115
33	Measurements of ultrastrong magnetic fields during relativistic laserâ€“plasma interactions. Physics of Plasmas, 2002, 9, 2244-2250.	0.7	115
34	Measurements of the Inverse Faraday Effect from Relativistic Laser Interactions with an Underdense Plasma. Physical Review Letters, 2001, 87, 215004.	2.9	113
35	Snowplow-like behavior in the implosion phase of wire array Z pinches. Physics of Plasmas, 2002, 9, 2293-2301.	0.7	106
36	Experimental studies of the advanced fast ignitor scheme. Physics of Plasmas, 2000, 7, 3721-3726.	0.7	103

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37	The dynamics of wire array Z-pinch implosions. Physics of Plasmas, 1999, 6, 2016-2022.	0.7	100
38	Study of x-ray emission from a table top plasma focus and its application as an x-ray backlighter. Journal of Applied Physics, 2000, 88, 3225-3230.	1.1	99
39	Characterization of High-Intensity Laser Propagation in the Relativistic Transparent Regime through Measurements of Energetic Proton Beams. Physical Review Letters, 2009, 102, 125002.	2.9	97
40	Azimuthal Structure and Global Instability in the Implosion Phase of Wire ArrayZ-Pinch Experiments. Physical Review Letters, 1998, 81, 4152-4155.	2.9	95
41	Observation of a Hot High-Current Electron Beam from a Self-Modulated Laser Wakefield Accelerator. Physical Review Letters, 2001, 86, 1227-1230.	2.9	95
42	X-ray backlighting of wire array Z-pinch implosions using X pinch. Review of Scientific Instruments, 2001, 72, 671-673.	0.6	92
43	Emittance Measurements of a Laser-Wakefield-Accelerated Electron Beam. Physical Review Letters, 2004, 92, 165006.	2.9	92
44	Fast particle generation and energy transport in laser-solid interactions. Physics of Plasmas, 2001, 8, 2323-2330.	0.7	88
45	Effect of Laser-Focusing Conditions on Propagation and Monoenergetic Electron Production in Laser-Wakefield Accelerators. Physical Review Letters, 2007, 98, 095004.	2.9	88
46	Plasma Wave Generation in a Self-Focused Channel of a Relativistically Intense Laser Pulse. Physical Review Letters, 1998, 81, 100-103.	2.9	79
47	The past, present, and future of Z pinches. Physics of Plasmas, 2000, 7, 1672-1680.	0.7	69
48	Proton deflectometry of a magnetic reconnection geometry. Physics of Plasmas, 2010, 17, .	0.7	65
49	Measurements of the hole boring velocity from Doppler shifted harmonic emission from solid targets. Physics of Plasmas, 1996, 3, 3242-3244.	0.7	61
50	Second harmonic generation and its interaction with relativistic plasma waves driven by forward Raman instability in underdense plasmas. Physics of Plasmas, 1997, 4, 1127-1131.	0.7	61
51	Two Different Modes of Nested Wire ArrayZ-Pinch Implosions. Physical Review Letters, 2000, 84, 1708-1711.	2.9	59
52	Ion Heating and Thermonuclear Neutron Production from High-Intensity Subpicosecond Laser Pulses Interacting with Underdense Plasmas. Physical Review Letters, 2002, 89, 165004.	2.9	59
53	The effect of high intensity laser propagation instabilities on channel formation in underdense plasmas. Physics of Plasmas, 2003, 10, 438-442.	0.7	59
54	Observations of the filamentation of high-intensity laser-produced electron beams. Physical Review E, 2004, 70, 056412.	0.8	57

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55	Bidirectional jet formation during driven magnetic reconnection in two-beam laserâ€“plasma interactions. Physics of Plasmas, 2008, 15, .	0.7	57
56	Measurement of Magnetic-Field Structures in a Laser-Wakefield Accelerator. Physical Review Letters, 2010, 105, 115002.	2.9	57
57	Measurements of relativistic self-phase-modulation in plasma. Physical Review E, 2002, 66, 036409.	0.8	56
58	Temporal development of hard and soft xâ€ray emission from a gasâ€puff Z pinch. Review of Scientific Instruments, 1986, 57, 2162-2164.	0.6	55
59	Optical and x-ray observations of carbon and aluminium fibreZ-pinch plasmas. Plasma Physics and Controlled Fusion, 1997, 39, 1-25.	0.9	55
60	Plasma Temperature in Optical Field Ionization of Gases by Intense Ultrashort Pulses of Ultraviolet Radiation. Physical Review Letters, 1995, 74, 554-557.	2.9	54
61	Dynamics of the Critical Surface in High-Intensity Laser-Solid Interactions: Modulation of the XUV Harmonic Spectra. Physical Review Letters, 2002, 88, 155001.	2.9	54
62	Table-top X-pinch for x-ray radiography. Applied Physics Letters, 2003, 82, 4602-4604.	1.5	51
63	Fast Advection of Magnetic Fields by Hot Electrons. Physical Review Letters, 2010, 105, 095001.	2.9	48
64	Table-top neutron source for characterization and calibration of dark matter detectors. Applied Physics Letters, 2002, 80, 3009-3011.	1.5	46
65	Self-modulated wakefield and forced laser wakefield acceleration of electrons. Physics of Plasmas, 2003, 10, 2071-2077.	0.7	46
66	Coherence and bandwidth measurements of harmonics generated from solid surfaces irradiated by intense picosecond laser pulses. Physical Review A, 1996, 54, 1597-1603.	1.0	40
67	Observation of annular electron beam transport in multi-TeraWatt laser-solid interactions. Plasma Physics and Controlled Fusion, 2006, 48, L11-L22.	0.9	36
68	Observation of plasma confinement in picosecond laser-plasma interactions. Physical Review E, 1993, 48, 2087-2093.	0.8	33
69	The effect of current prepulse on wire array Z-pinch implosions. Physics of Plasmas, 2002, 9, 375-377.	0.7	32
70	A nearly real-time high temperature laserâ€“plasma diagnostic using photonuclear reactions in tantalum. Review of Scientific Instruments, 2002, 73, 3801-3805.	0.6	31
71	Compact laser accelerators for X-ray phase-contrast imaging. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130032.	1.6	31
72	Coronal plasma behavior of the Z pinch produced from carbon and cryogenic deuterium fibers. Physics of Plasmas, 1998, 5, 3366-3372.	0.7	30

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73	Characterization of wire x pinches driven by a microsecond-long capacitive discharge. Journal of Applied Physics, 2000, 87, 8295-8303.	1.1	30
74	Plasma dynamics during the evolution of two wire Z-pinch. Plasma Physics and Controlled Fusion, 2004, 46, 1-10.	0.9	30
75	Z-pinch discharges in aluminum and tungsten wires. Physics of Plasmas, 1999, 6, 2579-2587.	0.7	28
76	Optical probing of fiber z-pinch plasmas. Physics of Plasmas, 1998, 5, 682-691.	0.7	27
77	Interaction of an ultra-intense laser pulse with a nonuniform preformed plasma. Physics of Plasmas, 2000, 7, 3009-3016.	0.7	26
78	Monoenergetic Electronic Beam Production Using Dual Collinear Laser Pulses. Physical Review Letters, 2008, 100, 255002.	2.9	25
79	High-Intensity-Laser-DrivenZPinches. Physical Review Letters, 2004, 92, 095001.	2.9	24
80	Observation of a Long-Wavelength Hosing Modulation of a High-Intensity Laser Pulse in Underdense Plasma. Physical Review Letters, 2010, 105, 095003.	2.9	22
81	Direct observations of the geometry of defects in germanium. Philosophical Magazine and Journal, 1963, 8, 1921-1936.	1.8	21
82	High intensity laser-plasma sources of ionsâ€"physics and future applications. Plasma Physics and Controlled Fusion, 2005, 47, B451-B463.	0.9	21
83	Effect of Relativistic Plasma on Extreme-Ultraviolet Harmonic Emission from Intense Laser-Matter Interactions. Physical Review Letters, 2008, 100, 125005.	2.9	21
84	Time-resolved energy measurement of electron beams in fiber Z-pinch discharges. Physics of Plasmas, 1997, 4, 490-492.	0.7	20
85	Self-Guided Wakefield Experiments Driven by Petawatt-Class Ultrashort Laser Pulses. IEEE Transactions on Plasma Science, 2008, 36, 1715-1721.	0.6	20
86	Target charging effects on proton acceleration during high-intensity short-pulse laser-solid interactions. Applied Physics Letters, 2004, 84, 2766-2768.	1.5	19
87	WillingaleetÂal.Reply:. Physical Review Letters, 2007, 98, .	2.9	19
88	Generation of Ultrahigh-Velocity Ionizing Shocks with Petawatt-Class Laser Pulses. Physical Review Letters, 2009, 103, 255001.	2.9	19
89	Characteristics of a Zâ€pinch produced from a glass optical fiber. Physics of Fluids B, 1991, 3, 2835-2843.	1.7	18
90	Laser plasma acceleration of electrons: Towards the production of monoenergetic beams. Physics of Plasmas, 2005, 12, 056711.	0.7	18

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91	Plasma cavitation in ultraintense laser interactions with underdense helium plasmas. New Journal of Physics, 2010, 12, 045014.	1.2	18
92	Observation of Laser Power Amplification in a Self-Injecting Laser Wakefield Accelerator. Physical Review Letters, 2018, 120, 254801.	2.9	18
93	Temporally and spatially resolved measurements of multi-megagauss magnetic fields in high intensity laser-produced plasmas. Physics of Plasmas, 2008, 15, .	0.7	17
94	Measurements of forward scattered laser radiation from intense sub-ps laser interactions with underdense plasmas. Physics of Plasmas, 2006, 13, 113103.	0.7	16
95	Observation of impurity free monoenergetic proton beams from the interaction of a CO2 laser with a gaseous target. Physics of Plasmas, 2011, 18, .	0.7	15
96	Effect of wire number on x-pinch discharges. Applied Physics Letters, 2006, 88, 261501.	1.5	13
97	Low energy spread electron beams from ionization injection in a weakly relativistic laser wakefield accelerator. Plasma Physics and Controlled Fusion, 2014, 56, 084007.	0.9	13
98	Imaging of high harmonic radiation emitted during the interaction of a 20 TW laser with a solid target. Journal of Applied Physics, 1997, 81, 2055-2058.	1.1	12
99	Return current and proton emission from short pulse laser interactions with wire targets. Physics of Plasmas, 2004, 11, 2806-2813.	0.7	12
100	Particle acceleration using intense laser produced plasmas. Laser Physics Letters, 2007, 4, 847-862.	0.6	12
101	Ultrashort pulse filamentation and monoenergetic electron beam production in LWFAs. Plasma Physics and Controlled Fusion, 2009, 51, 024010.	0.9	12
102	High density Z-pinches. Plasma Physics and Controlled Fusion, 1986, 28, 1931-1942.	0.9	10
103	Influence of a Prepulse Current on a FiberZPinch. Physical Review Letters, 1998, 81, 361-364.	2.9	10
104	The generation of mono-energetic electron beams from ultrashort pulse laserâ€“plasma interactions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 663-677.	1.6	10
105	Reduction of proton acceleration in high-intensity laser interaction with solid two-layer targets. Physics of Plasmas, 2006, 13, 123101.	0.7	10
106	Using self-generated harmonics as a diagnostic of high intensity laser-produced plasmas. Plasma Physics and Controlled Fusion, 2002, 44, B233-B245.	0.9	8
107	Soft xâ€ray spectra from a gasâ€puffzpinch. Journal of Applied Physics, 1989, 65, 3385-3390.	1.1	7
108	Clarket al.Reply:. Physical Review Letters, 2006, 96, .	2.9	7

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109	X-ray emission from plasmas formed using an excimer laser with various pulse lengths. Journal Physics D: Applied Physics, 1998, 31, 2777-2782.	1.3	6
110	Measurements of magnetic field generation at ionization fronts from laser wakefield acceleration experiments. New Journal of Physics, 2013, 15, 025034.	1.2	6
111	Measurements of forward scattered spectra from intense laser interactions in the forced laser wake-field regime. Plasma Physics and Controlled Fusion, 2006, 48, 29-37.	0.9	4
112	Development of XUV lasers at the RAL Central Laser Facility. Optical and Quantum Electronics, 1996, 28, 201-208.	1.5	3
113	Proton probe measurement of fast advection of magnetic fields by hot electrons. Plasma Physics and Controlled Fusion, 2011, 53, 124026.	0.9	3
114	Characterization of laser-driven proton beams from near-critical density targets using copper activation. Journal of Plasma Physics, 2015, 81, .	0.7	3
115	Faraday rotation measurements in MAGPIE generator. , 1997, , .		1
116	Recent progress in coherent XUV generation at RAL. , 1998, , .		1
117	The production of high-energy electrons from the interaction of an intense laser pulse with an underdense plasma. Journal of Modern Optics, 2003, 50, 673-681.	0.6	1
118	Comment on â€œPlasma Modulation of Harmonic Emission Spectra from Laser-Plasma Interactionsâ€• Physical Review Letters, 2008, 100, 199501; discussion 199502.	2.9	1
119	Observation of anomalous side-scattering in laser wakefield accelerators. Laser and Particle Beams, 2018, 36, 391-395.	0.4	1
120	Fast heating of ultrahigh-density plasma as a step towards laser fusion ignition. , 0, .		1
121	Optical multi-slit and x-ray measurements from carbon and deuterium pinches. , 1997, , .		0
122	Optimizing harmonics from solid targets. , 1998, , .		0
123	High intensity laser generation of proton beams for the production of Î²[sup +] sources used in positron emission tomography. AIP Conference Proceedings, 2001, , .	0.3	0
124	Nuclear diagnostics of high intensity laser plasma interactions. AIP Conference Proceedings, 2002, , .	0.3	0
125	Electron Acceleration beyond 200 MeV in Underdense Plasmas using Table Top Laser Systems. AIP Conference Proceedings, 2002, , .	0.3	0
126	Observation of mono-energetic structures in the spectrum of laser wakefield accelerated electrons. AIP Conference Proceedings, 2004, , .	0.3	0

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127	Study of Jet Formation in Wire X-pinches. AIP Conference Proceedings, 2006, , .	0.3	0
128	Dynamics of Multiple-Wire X-Pinches. IEEE Transactions on Plasma Science, 2008, 36, 1288-1289.	0.6	0
129	Monoenergetic Electron Beams from a Laser-Plasma Accelerator. , 2005, , .		0
130	Optical Characterization of Laser-Driven Electron Acceleration. , 2011, , .		0
131	The MAGPIE Generator. , 1994, , .		0
132	Hard X-Ray Diagnostic of Z-Pinch Discharges. , 1998, , 491-497.		0