

David A Alessi

List of Publications by Year in descending order

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88
papers

1,273
citations

361413

20
h-index

361022

35
g-index

92
all docs

92
docs citations

92
times ranked

993
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase-coherent, injection-seeded, table-top soft-X-ray lasers at 18.9Ånm and 13.9Ånm. Nature Photonics, 2008, 2, 94-98.	31.4	166
2	Saturated high-repetition-rate 189-nm tabletop laser in nickellike molybdenum. Optics Letters, 2005, 30, 165.	3.3	129
3	Demonstration of high-repetition-rate tabletop soft-x-ray lasers with saturated output at wavelengths down to 13.9nm and gain down to 10.9nm. Physical Review A, 2005, 72, .	2.5	125
4	Saturated 132?nm high-repetition-rate laser in nickellike cadmium. Optics Letters, 2005, 30, 2581.	3.3	87
5	Angular Dependence of Betatron X-Ray Spectra from a Laser-Wakefield Accelerator. Physical Review Letters, 2013, 111, 235004.	7.8	60
6	Large area high efficiency broad bandwidth 800 nm dielectric gratings for high energy laser pulse compression. Optics Express, 2009, 17, 23809.	3.4	56
7	High-energy (>70 keV) x-ray conversion efficiency measurement on the ARC laser at the National Ignition Facility. Physics of Plasmas, 2017, 24, .	1.9	45
8	High-energy 139?nm table-top soft-x-ray laser at 25?Hz repetition rate excited by a slab-pumped Ti:sapphire laser. Optics Letters, 2010, 35, 1632.	3.3	44
9	Picosecond laser damage performance assessment of multilayer dielectric gratings in vacuum. Optics Express, 2015, 23, 15532.	3.4	39
10	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. Physics of Plasmas, 2019, 26, .	1.9	34
11	High repetition rate operation of saturated tabletop soft x-ray lasers in transitions of neon-like ions near 30 nm. Optics Express, 2005, 13, 2093.	3.4	32
12	Gain-saturated 109 nm tabletop laser operating at 1 Hz repetition rate. Optics Letters, 2010, 35, 414.	3.3	30
13	Temporal coherence and spectral linewidth of an injection-seeded transient collisional soft x-ray laser. Optics Express, 2011, 19, 12087.	3.4	29
14	Improved beam characteristics of solid-target soft x-ray laser amplifiers by injection seeding with high harmonic pulses. Optics Letters, 2010, 35, 2317.	3.3	27
15	Time-Resolved Fuel Density Profiles of the Stagnation Phase of Indirect-Drive Inertial Confinement Implosions. Physical Review Letters, 2020, 125, 155003.	7.8	27
16	Active cooling of pulse compression diffraction gratings for high energy, high average power ultrafast lasers. Optics Express, 2016, 24, 30015.	3.4	26
17	Efficient Excitation of Gain-Saturated Sub-9-nm-Wavelength Tabletop Soft-X-Ray Lasers and Lasing Down to 7.36Ånm. Physical Review X, 2011, 1, .	8.9	22
18	Continuous high-repetition-rate operation of collisional soft-x-ray lasers with solid targets. Optics Letters, 2006, 31, 1994.	3.3	21

#	ARTICLE	IF	CITATIONS
19	Role of defects in laser-induced modifications of silica coatings and fused silica using picosecond pulses at 1053 nm: II Scaling laws and the density of precursors. Optics Express, 2017, 25, 15381.	3.4	21
20	Low-dispersion low-loss dielectric gratings for efficient ultrafast laser pulse compression at high average powers. Optics and Laser Technology, 2019, 117, 239-243.	4.6	21
21	Extreme ultraviolet laser-based table-top aerial image metrology of lithographic masks. Optics Express, 2010, 18, 14467.	3.4	20
22	The role of defects in laser-induced modifications of silica coatings and fused silica using picosecond pulses at 1053 nm: I Damage morphology. Optics Express, 2017, 25, 15161.	3.4	20
23	Injection laser system for Advanced Radiographic Capability using chirped pulse amplification on the National Ignition Facility. Applied Optics, 2019, 58, 8501.	1.8	20
24	Enhanced laser-plasma interactions using non-imaging optical concentrator targets. Optica, 2020, 7, 129.	9.3	20
25	Production of relativistic electrons at subrelativistic laser intensities. Physical Review E, 2020, 101, 031201.	2.1	18
26	Characteristics of a Saturated 18.9-nm Tabletop Laser Operating at 5-Hz Repetition Rate. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 1363-1367.	2.9	17
27	Spatio-temporal focal spot characterization and modeling of the NIF ARC kilojoule picosecond laser. Applied Optics, 2021, 60, 2288.	1.8	11
28	Order-of-magnitude increase in laser-target coupling at near-relativistic intensities using compound parabolic concentrators. Physical Review E, 2021, 103, L031201.	2.1	11
29	Laser Technology Development for High Peak Power Lasers Achieving Kilowatt Average Power and Beyond. , 2019, , .		10
30	Mirrors for petawatt lasers: Design principles, limitations, and solutions. Journal of Applied Physics, 2020, 128, .	2.5	9
31	Femtosecond damage experiments and modeling of broadband mid-infrared dielectric diffraction gratings. Optics Express, 2021, 29, 39983.	3.4	9
32	High Repetition Rate Collisional Soft X-Ray Lasers Based on Grazing Incidence Pumping. IEEE Journal of Quantum Electronics, 2006, 42, 4-13.	1.9	8
33	Highly ionized Ar plasma waveguides generated by a fast capillary discharge. IEEE Transactions on Plasma Science, 2005, 33, 582-583.	1.3	6
34	Measuring the angular dependence of betatron x-ray spectra in a laser-wakefield accelerator. Plasma Physics and Controlled Fusion, 2014, 56, 084016.	2.1	5
35	Characterization of laser-induced damage by picosecond pulses on multi-layer dielectric coatings for petawatt-class lasers. Proceedings of SPIE, 2015, , .	0.8	5
36	Multi-pulse time resolved gamma ray spectroscopy of the advanced radiographic capability using gas Cherenkov diagnostics. Physics of Plasmas, 2021, 28, .	1.9	5

#	ARTICLE	IF	CITATIONS
37	Saturated 132 nm high-repetition-rate laser in nickellike cadmium: erratum. Optics Letters, 2006, 31, 129.	3.3	4
38	Demonstration of saturated high repetition rate tabletop soft x-ray lasers at wavelengths down to 13.2 nm. , 2005, , .		3
39	Phase-Coherent Injection-Seeded Soft X-ray Lasers at Wavelengths Down to 132 nm. Optics and Photonics News, 2008, 19, 29.	0.5	3
40	Laser-induced modifications of HfO ₂ coatings using picosecond pulses at 1053 nm: Using polarization to isolate surface defects. Journal of Applied Physics, 2018, 124, .	2.5	3
41	Plasma expansion and relativistic filamentation in intense laser-irradiated cone targets. Physics of Plasmas, 2021, 28, .	1.9	3
42	Betatron x-ray production in mixed gases. , 2013, , .		2
43	Optical damage performance measurements of multilayer dielectric gratings for high energy short pulse lasers. , 2015, , .		2
44	A dual high-energy radiography platform with 15 μ m resolution at the National Ignition Facility. Review of Scientific Instruments, 2021, 92, 043712.	1.3	2
45	A Compressor for High Average Power Ultrafast Laser Pulses with High Energies. , 2017, , .		2
46	High Precision Characterization of the Kilojoule Multi-ps Advanced Radiographic Capability. , 2020, , .		2
47	High Repetition Rate Table-Top Soft X-Ray Lasers in Capillary Discharges and Laser-Created Plasmas. AIP Conference Proceedings, 2006, , .	0.4	1
48	Progress in the development of compact high-repetition-rate soft x-ray lasers: gain saturation at 10.9 nm and first demonstration of an all-diode-pumped soft x-ray laser. Proceedings of SPIE, 2009, , .	0.8	1
49	Advances in high repetition rate table-top soft x-ray lasers. , 2011, , .		1
50	Spectral width of seeded and ASE XUV lasers: experiment and numerical simulations. Proceedings of SPIE, 2011, , .	0.8	1
51	Optical Damage Performance Assessment of Petawatt Final Optics for the Advanced Radiographic Capability. , 2014, , .		1
52	Demonstration of a 100 Hz Repetition Rate Soft X-Ray Laser and Gain-Saturated Sub-10 nm Table-Top Lasers. Springer Proceedings in Physics, 2014, , 215-225.	0.2	1
53	Apparatus and Techniques for Measuring Laser Damage Resistance of Large-Area, Multilayer Dielectric Mirrors for Use with High Energy, Picosecond Lasers. , 2015, , .		1
54	High intensity laser-driven x-ray sources for high energy density science. , 2015, , .		1

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55	Advances in High Repetition Rate Soft X-Ray Lasers: Lasing Down to 10.9 nm and High Brightness Operation of a Seeded Soft X-Ray Amplifier Using a Solid Target. Springer Proceedings in Physics, 2007, , 149-159.	0.2	1
56	Recent Advances of Table-Top Soft x-ray Lasers. , 2010, , .		1
57	Saturated high-repetition soft X-ray lasers at wavelengths down to 13.9 nm in Ni-like ions. , 0, , .		0
58	Gain saturated operation of table-top soft X-ray lasers in neon-like ions at 5 Hz repetition rate. , 0, , .		0
59	Saturated 13.2 nm high repetition rate laser in nickel-like Cd and isoelectronic scaling down to 10.9 nm. , 2006, , .		0
60	Generation and pulsewidth characterization of high repetition rate soft x-ray lasers operating at 13.2 nm and 13.9 nm. , 2006, , .		0
61	Compact High Repetition Rate Soft X-Ray Lasers: A Doorway To High Intensity Coherent Soft X-Ray Science On A Table-Top. AIP Conference Proceedings, 2007, , .	0.4	0
62	High-brightness tabletop soft X-ray lasers at high repetition rate: injection-seeding of solid target plasma amplifiers and other developments. , 2007, , .		0
63	Compact Soft X-ray Lasers for Imaging, Material Processing, and Characterization at the Nanoscale. Electronics Manufacturing Technology Symposium (IEMT), IEEE/CPMT International, 2007, , .	0.0	0
64	Table-top Extreme Ultraviolet Laser Aerial Imaging of Lithographic Masks. , 2010, , .		0
65	Laser based aerial microscope for at-wavelength characterization of extreme ultraviolet lithography masks. , 2010, , .		0
66	Beam characteristics of an injection-seeded solid-target plasma soft x-ray laser. , 2010, , .		0
67	Advances in compact high repetition rate soft x-ray lasers. , 2010, , .		0
68	Demonstration of 10.9 nm table-top soft x-ray laser at 1 Hz repetition rate. , 2010, , .		0
69	Table-top soft X-ray laser operating at 13.9 nm with increased average power. , 2010, , .		0
70	Spectral Linewidth Measurement of an Injection-Seeded Transient 18.9 nm Soft X-Ray Laser. , 2011, , .		0
71	Bright High Average Power Table-top Soft X-Ray Lasers. , 2012, , .		0
72	Angular dependance of betatron x-ray spectra in a laser-wakefield accelerator. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	Simulations of wavelength-multiplexed holography for single-shot spatiotemporal characterization of NIF's advanced radiographic capability (ARC) laser. Review of Scientific Instruments, 2021, 92, 053003.	1.3	0
74	High Repetition Rate Soft X-Ray Lasers: A Doorway to Coherent Soft X-Ray Science on a Tabletop. , 2006, , .		0
75	Influence of Process Conditions on the Optical Properties HfO ₂ /SiO ₂ Thin Films for High Power Laser Coatings. , 2007, , .		0
76	Phase coherent, injection-seeded table-top soft x-ray lasers at wavelengths down to 13.9 nm. , 2008, , .		0
77	Generation of a 1 Picosecond Soft X-Ray Laser Pulses from an Injection-Seeded Plasma Amplifier. , 2009, , .		0
78	High Coherence Injection-Seeded Table-Top Soft X-Ray Lasers at Wavelengths Down to 13.2 nm. Springer Proceedings in Physics, 2009, , 125-133.	0.2	0
79	High Energy 13.9 nm Table-top Soft X-ray Laser Operating at 2.5 Hz Repetition Rate. , 2010, , .		0
80	1 Hz Operation of a Gain-Saturated 10.9 nm Table-Top laser. , 2010, , .		0
81	Table-top Short Pulse Driver for sub-10 nm soft X-ray lasers. , 2011, , .		0
82	Reflection microscope for actinic mask inspection and other progress in soft x-ray laser nano-imaging. Springer Proceedings in Physics, 2011, , 359-370.	0.2	0
83	Temporal coherence and spectral width of seeded and ASE XUV lasers. Springer Proceedings in Physics, 2011, , 101-109.	0.2	0
84	CaractÃ©risation spectrale des lasers XUV. , 2011, , .		0
85	Temporal coherence measurements of a seeded GRIP transient Ni-like Mo soft X-ray laser. , 2011, , .		0
86	Demonstration of an all-diode pumped soft x-ray laser and other advances in table-top soft x-ray lasers. Springer Proceedings in Physics, 2011, , 57-68.	0.2	0
87	Measurement of the Temporal Coherence of a Seeded GRIP Transient Mo Soft X-ray Laser. Springer Proceedings in Physics, 2011, , 143-148.	0.2	0
88	Table-top High Energy Short Pulse Driver for sub-10 nm Soft X-ray Lasers. , 2012, , .		0