David A Alessi

List of Publications by Year
in descending order

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	Spatio-temporal focal spot characterization and modeling of the NIF ARC kilojoule picosecond laser. Applied Optics, 2021, 60, 2288.	1.8	11
2	Multi-pulse time resolved gamma ray spectroscopy of the advanced radiographic capability using gas Cherenkov diagnostics. Physics of Plasmas, 2021, 28, .	1.9	5
3	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
4	A dual high-energy radiography platform with 15 Î¼m resolution at the National Ignition Facility. Review of Scientific Instruments, 2021, 92, 043712.	1.3	2
5	Simulations of wavelength-multiplexed holography for single-shot spatiotemporal characterization of NIFâ€™s advanced radiographic capability (ARC) laser. Review of Scientific Instruments, 2021, 92, 053003.	1.3	0
6	Femtosecond damage experiments and modeling of broadband mid-infrared dielectric diffraction gratings. Optics Express, 2021, 29, 39983.	3.4	9
7	Plasma expansion and relativistic filamentation in intense laser-irradiated cone targets. Physics of Plasmas, 2021, 28, .	1.9	3
8	Time-Resolved Fuel Density Profiles of the Stagnation Phase of Indirect-Drive Inertial Confinement Implosions. Physical Review Letters, 2020, 125, 155003.	7.8	27
9	Mirrors for petawatt lasers: Design principles, limitations, and solutions. Journal of Applied Physics, 2020, 128, .	2.5	9
10	Production of relativistic electrons at subrelativistic laser intensities. Physical Review E, 2020, 101, 031201.	2.1	18
11	Enhanced laserâ€“plasma interactions using non-imaging optical concentrator targets. Optica, 2020, 7, 129.	9.3	20
12	High Precision Characterization of the Kilojoule Multi-ps Advanced Radiographic Capability. , 2020, , .		2
13	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
14	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. Physics of Plasmas, 2019, 26, .	1.9	34
15	Laser Technology Development for High Peak Power Lasers Achieving Kilowatt Average Power and Beyond. , 2019, , .		10
16	Injection laser system for Advanced Radiographic Capability using chirped pulse amplification on the National Ignition Facility. Applied Optics, 2019, 58, 8501.	1.8	20
17	Laser-induced modifications of HfO2 coatings using picosecond pulses at 1053â€‰nm: Using polarization to isolate surface defects. Journal of Applied Physics, 2018, 124, .	2.5	3
18	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

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19	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
20	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
21	A Compressor for High Average Power Ultrafast Laser Pulses with High Energies. , 2017, , .		2
22	Active cooling of pulse compression diffraction gratings for high energy, high average power ultrafast lasers. Optics Express, 2016, 24, 30015.	3.4	26
23	Optical damage performance measurements of multilayer dielectric gratings for high energy short pulse lasers. , 2015, , .		2
24	Picosecond laser damage performance assessment of multilayer dielectric gratings in vacuum. Optics Express, 2015, 23, 15532.	3.4	39
25	Apparatus and Techniques for Measuring Laser Damage Resistance of Large-Area, Multilayer Dielectric Mirrors for Use with High Energy, Picosecond Lasers. , 2015, , .		1
26	Characterization of laser-induced damage by picosecond pulses on multi-layer dielectric coatings for petawatt-class lasers. Proceedings of SPIE, 2015, , .	0.8	5
27	High intensity laser-driven x-ray sources for high energy density science. , 2015, , .		1
28	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
29	Optical Damage Performance Assessment of Petawatt Final Optics for the Advanced Radiographic Capability. , 2014, , .		1
30	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
31	Angular dependance of betatron x-ray spectra in a laser-wakefield accelerator. , 2014, , .		0
32	Angular Dependence of Betatron X-Ray Spectra from a Laser-Wakefield Accelerator. Physical Review Letters, 2013, 111, 235004.	7.8	60
33	Betatron x-ray production in mixed gases. , 2013, , .		2
34	Bright High Average Power Table-top Soft X-Ray Lasers. , 2012, , .		0
35	Table-top High Energy Short Pulse Driver for sub-10 nm Soft X-ray Lasers. , 2012, , .		0
36	Temporal coherence and spectral linewidth of an injection-seeded transient collisional soft x-ray laser. Optics Express, 2011, 19, 12087.	3.4	29

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37	Spectral Linewidth Measurement of an Injection-Seeded Transient 18.9 nm Soft X-Ray Laser. , 2011, , .		0
38	Advances in high repetition rate table-top soft x-ray lasers. , 2011, , .		1
39	Spectral width of seeded and ASE XUV lasers: experiment and numerical simulations. Proceedings of SPIE, 2011, , .	0.8	1
40	Efficient Excitation of Gain-Saturated Sub-9-nm-Wavelength Tabletop Soft-X-Ray Lasers and Lasing Down to 7.36Ânm. Physical Review X, 2011, 1, .	8.9	22
41	Table-top Short Pulse Driver for sub-10 nm soft X-ray lasers. , 2011, , .		0
42	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
43	Temporal coherence and spectral width of seeded and ASE XUV lasers. Springer Proceedings in Physics, 2011, , 101-109.	0.2	0
44	CaractÃ©risation spectrale des lasers XUV. , 2011, , .		0
45	Temporal coherence measurements of a seeded GRIP transient Ni-like Mo soft X-ray laser. , 2011, , .		0
46	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
47	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
48	Table-top Extreme Ultraviolet Laser Aerial Imaging of Lithographic Masks. , 2010, , .		0
49	Laser based aerial microscope for at-wavelength characterization of extreme ultraviolet lithography masks. , 2010, , .		0
50	Extreme ultraviolet laser-based table-top aerial image metrology of lithographic masks. Optics Express, 2010, 18, 14467.	3.4	20
51	Gain-saturated 109 nm tabletop laser operating at 1 Hz repetition rate. Optics Letters, 2010, 35, 414.	3.3	30
52	High-energy 139â€‰nm table-top soft-x-ray laser at 25â€‰Hz repetition rate excited by a slab-pumped Ti:sapphire laser. Optics Letters, 2010, 35, 1632.	3.3	44
53	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
54	Beam characteristics of an injection-seeded solid-target plasma soft x-ray laser. , 2010, , .		0

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55	Advances in compact high repetition rate soft x-ray lasers. , 2010, , .		0
56	Demonstration of 10.9 nm table-top soft x-ray laser at 1 Hz repetition rate. , 2010, , .		0
57	Table-top soft X-ray laser operating at 13.9 nm with increased average power. , 2010, , .		0
58	High Energy 13.9 nm Table-top Soft X-ray Laser Operating at 2.5 Hz Repetition Rate. , 2010, , .		0
59	Recent Advances of Table-Top Soft x-ray Lasers. , 2010, , .		1
60	1 Hz Operation of a Gain-Saturated 10.9 nm Table-Top laser. , 2010, , .		0
61	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
62	Large area high efficiency broad bandwidth 800 nm dielectric gratings for high energy laser pulse compression. Optics Express, 2009, 17, 23809.	3.4	56
63	Generation of a 1 Picosecond Soft X-Ray Laser Pulses from an Injection-Seeded Plasma Amplifier. , 2009, , .		0
64	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
65	Phase-coherent, injection-seeded, table-top soft-X-ray lasers at 18.9Ânm and 13.9Ânm. Nature Photonics, 2008, 2, 94-98.	31.4	166
66	Phase-Coherent Injection-Seeded Soft X-ray Lasers at Wavelengths Down to 132 nm. Optics and Photonics News, 2008, 19, 29.	0.5	3
67	Phase coherent, injection-seeded table-top soft x-ray lasers at wavelengths down to 13.9 nm. , 2008, , .		0
68	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
69	High-brightness tabletop soft X-ray lasers at high repetition rate: injection-seeding of solid target plasma amplifiers and other developments. , 2007, , .		0
70	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
71	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
72	Influence of Process Conditions on the Optical Properties HfO2/SiO2 Thin Films for High Power Laser Coatings. , 2007, , .		0

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73	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
74	Saturated 132 nm high-repetition-rate laser in nickellike cadmium: erratum. Optics Letters, 2006, 31, 129.	3.3	4
75	Continuous high-repetition-rate operation of collisional soft-x-ray lasers with solid targets. Optics Letters, 2006, 31, 1994.	3.3	21
76	High Repetition Rate Table-Top Soft X-Ray Lasers in Capillary Discharges and Laser-Created Plasmas. AIP Conference Proceedings, 2006, , .	0.4	1
77	Saturated 13.2 nm high repetition rate laser in nickel-like Cd and isoelectronic scaling down to 10.9 nm. , 2006, , .		0
78	Generation and pulsewidth characterization of high repetition rate soft x-ray lasers operating at 13.2 nm and 13.9 nm. , 2006, , .		0
79	High Repetition Rate Soft X-Ray Lasers: A Doorway to Coherent Soft X-Ray Science on a Tabletop. , 2006, , .		0
80	Demonstration of saturated high repetition rate tabletop soft x-ray lasers at wavelengths down to 13.2 nm. , 2005, , .		3
81	Highly ionized Ar plasma waveguides generated by a fast capillary discharge. IEEE Transactions on Plasma Science, 2005, 33, 582-583.	1.3	6
82	Demonstration of high-repetition-rate tabletop soft-x-ray lasers with saturated output at wavelengths down to13.9nmand gain down to10.9nm. Physical Review A, 2005, 72, .	2.5	125
83	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
84	Saturated high-repetition-rate 189-nm tabletop laser in nickellike molybdenum. Optics Letters, 2005, 30, 165.	3.3	129
85	Saturated 132?nm high-repetition-rate laser in nickellike cadmium. Optics Letters, 2005, 30, 2581.	3.3	87
86	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
87	Saturated high-repetition soft X-ray lasers at wavelengths down to 13.9 nm in Ni-like ions. , 0, , .		0
88	Gain saturated operation of table-top soft X-ray lasers in neon-like ions at 5 Hz repetition rate. , 0, , .		0