Carmen S Menoni

List of Publications by Year
in descending order

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73 papers	2,020 citations	331670 21 h-index	233421 45 g-index
73 all docs	73 docs citations	73 times ranked	1836 citing authors

#	Article	IF	Citations
1	Crystal data for high-pressure phases of silicon. Physical Review B, 1986, 34, 4679-4684.	3.2	458
2	Ultrahigh 22 nm resolution coherent diffractive imaging using a desktop 13 nm high harmonic source. Optics Express, 2011, 19, 22470.	3.4	164
3	Germanium at high pressures. Physical Review B, 1986, 34, 362-368.	3.2	158
4	High numerical aperture tabletop soft x-ray diffraction microscopy with 70-nm resolution. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 24-27.	7.1	156
5	Single-shot extreme ultraviolet laser imaging of nanostructures with wavelength resolution. Optics Letters, 2008, 33, 518.	3.3	94
6	Three-dimensional nanoscale molecular imaging by extreme ultraviolet laser ablation mass spectrometry. Nature Communications, 2015, 6, 6944.	12.8	94
7	085â€‰â€‰PW laser operation at 33â€‰â€‰Hz and high-contrast ultrahigh-intensity Î»â€‰=â€‰400â€‰â€‰nm second-harmo beamline. Optics Letters, 2017, 42, 3828.	3.3	86
8	Equation of state of InP to 19 GPa. Physical Review B, 1987, 35, 7520-7525.	3.2	76
9	1â€‰â€‰J, 05â€‰â€‰kHz repetition rate picosecond laser. Optics Letters, 2016, 41, 3339.	3.3	76
10	Demonstration of a 100ÂHz repetition rate gain-saturated diode-pumped table-top soft x-ray laser. Optics Letters, 2012, 37, 3624.	3.3	63
11	1.1â€‰â€‰J Yb:YAG picosecond laser at 1â€‰â€‰kHz repetition rate. Optics Letters, 2020, 45, 6615.	3.3	57
12	High laser-resistant multilayer mirrors by nodular defect planarization [Invited]. Applied Optics, 2014, 53, A291.	1.8	35
13	Characterization of extreme ultraviolet laser ablation mass spectrometry for actinide trace analysis and nanoscale isotopic imaging. Journal of Analytical Atomic Spectrometry, 2017, 32, 1092-1100.	3.0	33
14	Warm photoionized plasmas created by soft-x-ray laser irradiation of solid targets. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B32.	2.1	32
15	Femtosecond pulse damage thresholds of dielectric coatings in vacuum. Optics Express, 2011, 19, 5690.	3.4	30
16	Scaling diode-pumped, high energy picosecond lasers to kilowatt average powers. High Power Laser Science and Engineering, 2018, 6, .	4.6	29
17	Low Mechanical Loss <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:msub><mml:mrow><mml:mi>TiO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml: Coatings for Reduced Thermal Noise in Gravitational Wave Interferometers. Physical Review Letters, 2021, 127, 071101.	7.8	27
18	Ablation of Submicrometer Holes Using an Extreme-Ultraviolet Laser. Physical Review Applied, 2015, 3, .	3.8	25

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19	Structure and morphology of low mechanical loss TiO₂-doped Ta₂O₅. Optical Materials Express, 2020, 10, 1687.	3.0	24
20	Demonstration of Nanomachining With Focused Extreme Ultraviolet Laser Beams. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 443-448.	2.9	23
21	Transient phenomena in the dielectric breakdown of HfO2 optical films probed by ultrafast laser pulse pairs. Applied Physics Letters, 2010, 97, .	3.3	21
22	Extreme ultraviolet laser-based table-top aerial image metrology of lithographic masks. Optics Express, 2010, 18, 14467.	3.4	20
23	Substrate and coating defect planarization strategies for high-laser-fluence multilayer mirrors. Thin Solid Films, 2015, 592, 216-220.	1.8	19
24	Hour-long continuous operation of a tabletop soft x-ray laser at 50-100 Hz repetition rate. Optics Express, 2013, 21, 28380.	3.4	16
25	Demonstration of a kilowatt average power, 1 J, green laser. Optics Letters, 2020, 45, 6803.	3.3	16
26	Strategies to increase laser damage performance of Ta_2O_5/SiO_2 mirrors by modifications of the top layer design. Applied Optics, 2017, 56, C136.	2.1	15
27	Depth-Profiling Microanalysis of CoNCN Water-Oxidation Catalyst Using a Î» = 46.9 nm Plasma Laser for Nano-Ionization Mass Spectrometry. Analytical Chemistry, 2018, 90, 9234-9240.	6.5	15
28	Comparison of damage and ablation dynamics of multilayer dielectric films initiated by few-cycle pulses versus longer femtosecond pulses. Optics Letters, 2020, 45, 2672.	3.3	15
29	Generation and characterization of isolated attosecond pulses at 100â€‰â€‰kHz repetition rate. Optica, 2022, 9, 145.	9.3	15
30	Enhanced medium-range order in vapor-deposited germania glasses at elevated temperatures. Science Advances, 2021, 7, eabh1117.	10.3	14
31	Generation and characterisation of few-pulse attosecond pulse trains at 100 kHz repetition rate. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 194003.	1.5	14
32	Comprehensive study of amorphous metal oxide and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>Ta</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>5</mml:mn></mml:mrow></mml:msub></mml:mrow><mml:mml -based mixed oxide coatings for gravitational-wave detectors. Physical Review D, 2022, 105, .	4.7	13
33	Imaging at the Nanoscale With Practical Table-Top EUV Laser-Based Full-Field Microscopes. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 434-442.	2.9	11
34	Structural Evolution that Affects the Room-Temperature Internal Friction of Binary Oxide Nanolaminates: Implications for Ultrastable Optical Cavities. ACS Applied Nano Materials, 2020, 3, 12308-12313.	5.0	11
35	Isotopic Heterogeneity Imaged in a Uranium Fuel Pellet with Extreme Ultraviolet Laser Ablation and Ionization Time-of-Flight Mass Spectrometry. Analytical Chemistry, 2021, 93, 1016-1024.	6.5	8
36	Defect-free periodic structures using extreme ultraviolet Talbot lithography in a table-top system. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F604.	1.2	7

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37	Thin film absorption characterization by focus error thermal lensing. Review of Scientific Instruments, 2017, 88, 123104.	1.3	7
38	1 Joule, 100 Hz Repetition Rate, Picosecond CPA Laser for Driving High Average Power Soft X-Ray Lasers. , 2014, , .		6
39	Restoration of soft x-ray laser images of nanostructures. Optics Express, 2014, 22, 13846.	3.4	6
40	Investigation of laser annealing mechanisms in thin film coatings by photothermal microscopy. Optics Express, 2019, 27, 5729.	3.4	6
41	Investigation of effects of assisted ion bombardment on mechanical loss of sputtered tantala thin films for gravitational wave interferometers. Physical Review D, 2019, 100, .	4.7	4
42	Characterization of absorptance homogeneity in thin-film coatings for high-power lasers by thermal lensing microscopy. Applied Optics, 2019, 58, 7233.	1.8	4
43	2D dynamic ionization simulation from ultrashort pulses in multilayer dielectric interference coatings. , 2020, , .		4
44	Single-shot large field of view Fourier transform holography with a picosecond plasma-based soft X-ray laser. Optics Express, 2020, 28, 35898.	3.4	4
45	Depth determination of critical fluence-limiting defects within planarized and non-planarized mirror coatings. , 2015, , .		2
46	Laser induced damage in coatings for cryogenic Yb:YAG active mirror amplifiers. Optics Letters, 2020, 45, 4476.	3.3	2
47	Advances in full field microscopy with table-top soft x-ray lasers. Proceedings of SPIE, 2009, , .	0.8	1
48	Analysis of spatial resolution and coherence demands in soft x-ray image-plane holographic microscopy with two zone plates. , 2013, , .		1
49	High Average Power, 100 Hz Repetition Rate, Table-top EUV/Soft X-Ray Lasers. , 2013, , .		1
50	Optical coatings excited by femtosecond lasers near the damage threshold: challenges and opportunities. Proceedings of SPIE, 2015, , .	0.8	1
51	Absorptance homogeneity and its relaxation in thin films by photothermal microscopy. , 2019, , .		1
52	Table-top microscope for at-wavelength inspection of extreme ultraviolet lithography mask. , 2009, , .		0
53	Assessment of illumination characteristics of soft x-ray laser-based full-field microscopes. , 2011, , .		0
54	High-average-power 100-Hz repetition rate table-top soft x-ray lasers. Proceedings of SPIE, 2013, , .	0.8	0

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55	Nanoscale resolution image plane holographic microscopy. , 2013, , .		0
56	Comparative STEREO-LID (Spatio-TEmporally REsolved Optical Laser-Induced Damage) studies of critical defect distributions in IBS, ALD, and electron-beam coated dielectric films. Proceedings of SPIE, 2015, , .	0.8	0
57	High performance interference coatings for 1-2Î¼m high energy lasers. , 2016, , .		0
58	Development of a kilowatt-class, joule-level ultrafast laser for driving compact high average power coherent EUV/soft x-ray sources. Proceedings of SPIE, 2016, , .	0.8	0
59	Advances in High Average Power, 100ÂHz Repetition Rate Table-Top Soft X-Ray Lasers. Springer Proceedings in Physics, 2016, , 11-19.	0.2	0
60	Demonstration of a 1 Joule, 500 W average power picosecond laser. Proceedings of SPIE, 2017, , .	0.8	0
61	Progress in high repetition rate soft x-ray laser development and pump lasers at Colorado State University. , 2017, , .		0
62	Nanoscale Isotopic Imaging by Extreme Ultraviolet Laser Ablation Mass Spectrometry. , 2019, , .		0
63	1.1 J Yb:YAG Picosecond Laser at 1 kHz Repetition Rate. , 2021, , .		0
64	Survey of metal oxides for coatings of ultra-stable optical cavities. , 2021, , .		0
65	Relative intersection of confidence intervals rule for sharper restoration of soft x-ray images. Applied Optics, 2016, 55, 8932.	2.1	0
66	Development of High Repetition Rate, High Energy Diode-Pumped Short Pulse Lasers and Applications. , 2017, , .		0
67	Photothermal microscopy characterization of multiphoton annealing of defects in thin-film coatings for high-power lasers. , 2019, , .		0
68	Rapid quasi non-destructive 3D chemical visualization with tabletop x-ray laser mass spectrometry. , 2019, , .		0
69	Extreme ultraviolet laser ablation of solid targets. , 2019, , .		0
70	Extreme ultraviolet laser ablation mass spectrometry for chemical mapping at the nanoscale. , 2021, , .		0
71	Optical and structural properties of thin film amorphous oxides for photonic structures. , 2020, , .		0
72	1 kHz Repetition Rate 1.1 J Picosecond Laser. , 2021, , .		0

#	Article	IF	Citations
73	Extreme Ultraviolet Laser Ablation Mass Spectrometry: A New Tool for Chemical Mapping at the Nanoscale. , 2022, , .		0