Eduardo Granados

List of Publications by Year
in descending order

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117 papers	2,915 citations	185998 28 h-index	174990 52 g-index
120 all docs	120 docs citations	120 times ranked	2881 citing authors

#	Article	IF	Citations
1	High conversion efficiency, high energy terahertz pulses by optical rectification in cryogenically cooled lithium niobate. Optics Letters, 2013, 38, 796.	1.7	245
2	Nanosecond formation of diamond and lonsdaleite by shock compression of graphite. Nature Communications, 2016, 7, 10970.	5.8	167
3	Phase-coherent, injection-seeded, table-top soft-X-ray lasers at 18.9Ânm and 13.9Ânm. Nature Photonics, 2008, 2, 94-98.	15.6	166
4	Acceleration of electrons in the plasma wakefield of a proton bunch. Nature, 2018, 561, 363-367.	13.7	162
5	Formation of diamonds in laser-compressed hydrocarbons at planetary interior conditions. Nature Astronomy, 2017, 1, 606-611.	4.2	152
6	The Matter in Extreme Conditions instrument at the Linac Coherent Light Source. Journal of Synchrotron Radiation, 2015, 22, 520-525.	1.0	110
7	Matter under extreme conditions experiments at the Linac Coherent Light Source. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 092001.	0.6	107
8	High-Brightness Injection-Seeded Soft-X-Ray-Laser Amplifier Using a Solid Target. Physical Review Letters, 2006, 97, 123901.	2.9	104
9	Deep ultraviolet diamond Raman laser. Optics Express, 2011, 19, 10857.	1.7	83
10	High-energy, phase-stable, ultrabroadband kHz OPCPA at 21 Î¼m pumped by a picosecond cryogenic Yb:YAG laser. Optics Express, 2011, 19, 15538.	1.7	76
11	Characterizing the ionization potential depression in dense carbon plasmas with high-precision spectrally resolved x-ray scattering. Plasma Physics and Controlled Fusion, 2019, 61, 014015.	0.9	63
12	Mode-locked picosecond diamond Raman laser. Optics Letters, 2010, 35, 556.	1.7	62
13	Highly efficient terahertz pulse generation by optical rectification in stoichiometric and cryo-cooled congruent lithium niobate. Journal of Modern Optics, 2015, 62, 1486-1493.	0.6	60
14	Compression Freezing Kinetics of Water to Ice VII. Physical Review Letters, 2017, 119, 025701.	2.9	60
15	Cryogenic Yb:YAG composite-thin-disk for high energy and average power amplifiers. Optics Letters, 2015, 40, 2610.	1.7	57
16	Synchronously pumped continuous-wave mode-locked yellow Raman laser at 559 nm. Optics Express, 2009, 17, 569.	1.7	50
17	Ultrafast X-Ray Diffraction Studies of the Phase Transitions and Equation of State of Scandium Shock Compressed to 82ÂGPa. Physical Review Letters, 2017, 118, 025501.	2.9	50
18	Efficient generation of ultra-intense few-cycle radially polarized laser pulses. Optics Letters, 2014, 39, 2487.	1.7	49

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19	Experimental Observation of Plasma Wakefield Growth Driven by the Seeded Self-Modulation of a Proton Bunch. Physical Review Letters, 2019, 122, 054801.	2.9	49
20	Experimental Observation of Proton Bunch Modulation in a Plasma at Varying Plasma Densities. Physical Review Letters, 2019, 122, 054802.	2.9	49
21	Measurement of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mtext>â˜</mml:mtext><mml:mi>ps</mml:mi></mml:mrow></mml:math laser pulses from an injection-seeded plasma amplifier. Physical Review A, 2009, 79, .	1.0	42
22	Optical laser systems at the Linac Coherent Light Source. Journal of Synchrotron Radiation, 2015, 22, 526-531.	1.0	42
23	Photonic structures in diamond based on femtosecond UV laser induced periodic surface structuring (LIPSS). Optics Express, 2017, 25, 15330.	1.7	42
24	Identification of Phase Transitions and Metastability in Dynamically Compressed Antimony Using Ultrafast X-Ray Diffraction. Physical Review Letters, 2019, 122, 255704.	2.9	36
25	Multi-wavelength, all-solid-state, continuous wave mode locked picosecond Raman laser. Optics Express, 2010, 18, 5289.	1.7	34
26	Femtosecond diffraction studies of solid and liquid phase changes in shock-compressed bismuth. Scientific Reports, 2018, 8, 16927.	1.6	33
27	Tailoring diamondâ€™s optical properties via direct femtosecond laser nanostructuring. Scientific Reports, 2018, 8, 14262.	1.6	33
28	Highly coherent injection-seeded 132 nm tabletop soft x-ray laser. Optics Letters, 2008, 33, 491.	1.7	31
29	Wavelength Scaling of High Harmonic Generation Close to the Multiphoton Ionization Regime. Physical Review Letters, 2013, 111, 073901.	2.9	29
30	Pulse compression in synchronously pumped mode locked Raman lasers. Optics Express, 2010, 18, 20422.	1.7	28
31	Direct imaging of ultrafast lattice dynamics. Science Advances, 2019, 5, eaau8044.	4.7	28
32	Characteristics of 2-photon ultraviolet laser etching of diamond. Optical Materials Express, 2011, 1, 576.	1.6	27
33	Demonstration of X-ray Thomson scattering as diagnostics for miscibility in warm dense matter. Nature Communications, 2020, 11, 2620.	5.8	27
34	Mode-locked deep ultraviolet Ce:LiCAF laser. Optics Letters, 2009, 34, 1660.	1.7	26
35	High-pressure chemistry of hydrocarbons relevant to planetary interiors and inertial confinement fusion. Physics of Plasmas, 2018, 25, .	0.7	24
36	The phase-contrast imaging instrument at the matter in extreme conditions endstation at LCLS. Review of Scientific Instruments, 2016, 87, 103701.	0.6	23

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37	Evidence for Crystalline Structure in Dynamically-Compressed Polyethylene up to 200 GPa. Scientific Reports, 2019, 9, 4196.	1.6	22
38	Melting and refreezing of zirconium observed using ultrafast x-ray diffraction. Physical Review Research, 2020, 2, .	1.3	22
39	Femtosecond Visualization of hcp-Iron Strength and Plasticity under Shock Compression. Physical Review Letters, 2021, 127, 205501.	2.9	21
40	Continuously tunable diamond Raman laser for resonance laser ionization. Optics Letters, 2019, 44, 3924.	1.7	19
41	High-order harmonic generation in Xe, Kr, and Ar driven by a 2.1-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î¼</mml:mi></mml:math>m source: High-order harmonic spectroscopy under macroscopic effects. Physical Review A, 2012, 86, .	1.0	17
42	Shock drive capabilities of a 30-Joule laser at the matter in extreme conditions hutch of the Linac Coherent Light Source. Review of Scientific Instruments, 2017, 88, 105113.	0.6	17
43	Enhancement of surface area and wettability properties of boron doped diamond by femtosecond laser-induced periodic surface structuring. Optical Materials Express, 2017, 7, 3389.	1.6	17
44	Tracking the ultrafast XUV optical properties of x-ray free-electron-laser heated matter with high-order harmonics. Physical Review A, 2018, 97, .	1.0	16
45	Liquid Structure of Shock-Compressed Hydrocarbons at Megabar Pressures. Physical Review Letters, 2018, 121, 245501.	2.9	16
46	Measurements of the momentum-dependence of plasmonic excitations in matter around 1 Mbar using an X-ray free electron laser. Applied Physics Letters, 2019, 114, 014101.	1.5	16
47	Cut-off scaling of high-harmonic generation driven by a femtosecond visible optical parametric amplifier. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 205601.	0.6	14
48	Physics of Plasmas, 2015, 22, 056307.	0.7	14
49	Broadly tunable linewidth-invariant Raman Stokes comb for selective resonance photoionization. Optics Express, 2020, 28, 8589.	1.7	14
50	Spectral synthesis of multimode lasers to the Fourier limit in integrated Fabryâ€“Perot diamond resonators. Optica, 2022, 9, 317.	4.8	14
51	Transition between Instability and Seeded Self-Modulation of a Relativistic Particle Bunch in Plasma. Physical Review Letters, 2021, 126, 164802.	2.9	13
52	New experimental platform to study high density laser-compressed matter. Review of Scientific Instruments, 2014, 85, 11E616.	0.6	12
53	High resolution x-ray Thomson scattering measurements from cryogenic hydrogen jets using the linac coherent light source. Review of Scientific Instruments, 2016, 87, 11E524.	0.6	12
54	Nanometer-scale characterization of laser-driven compression, shocks, and phase transitions, by x-ray scattering using free electron lasers. Physics of Plasmas, 2017, 24, .	0.7	12

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55	Recovery of metastable dense Bi synthesized by shock compression. Applied Physics Letters, 2019, 114, 120601.	1.5	12
56	Wavelength scaling of optimal hollow-core fiber compressors in the single-cycle limit. Optics Express, 2012, 20, 9099.	1.7	11
57	Plasmas, 2015, 22, 056319.	0.7	11
58	Tracking the density evolution in counter-propagating shock waves using imaging X-ray scattering. Applied Physics Letters, 2016, 109, 031108.	1.5	11
59	Using simultaneous x-ray diffraction and velocity interferometry to determine material strength in shock-compressed diamond. Applied Physics Letters, 2020, 116, .	1.5	10
60	Measurement of diamond nucleation rates from hydrocarbons at conditions comparable to the interiors of icy giant planets. Physical Review B, 2020, 101, .	1.1	10
61	RADIATION DOSE MEASUREMENTS FOR HIGH-INTENSITY LASER INTERACTIONS WITH SOLID TARGETS AT SLAC. Radiation Protection Dosimetry, 2016, 172, 346-355.	0.4	9
62	Commissioning of the electron injector for the AWAKE experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 953, 163194.	0.7	9
63	Electron-Ion Temperature Relaxation in Warm Dense Hydrogen Observed With Picosecond Resolved X-Ray Scattering. Frontiers in Physics, 2022, 10, .	1.0	9
64	Proton-driven plasma wakefield acceleration in AWAKE. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180418.	1.6	8
65	Experimental study of wakefields driven by a self-modulating proton bunch in plasma. Physical Review Accelerators and Beams, 2020, 23, .	0.6	8
66	Tunable spectral squeezers based on monolithically integrated diamond Raman resonators. Applied Physics Letters, 2022, 120, .	1.5	8
67	Controlled Growth of the Self-Modulation of a Relativistic Proton Bunch in Plasma. Physical Review Letters, 2022, 129, .	2.9	8
68	Asynchronous cross-correlation for weak ultrafast deep ultraviolet laser pulses. Applied Physics B: Lasers and Optics, 2009, 97, 759-763.	1.1	7
69	Photochemical Etching of Carbonyl Groups from a Carbon Matrix: The (001) Diamond Surface. Physical Review Letters, 2019, 122, 016802.	2.9	7
70	LIPSS manufacturing with regularity control through laser wavefront curvature. Surfaces and Interfaces, 2021, 25, 101205.	1.5	7
71	Imaging at an x-ray absorption edge using free electron laser pulses for interface dynamics in high energy density systems. Review of Scientific Instruments, 2017, 88, 053501.	0.6	6
72	Femtosecond laser fabrication of volume-phase gratings in CdS_xSe_{1-x}-doped borosilicate glass at a low repetition rate. Applied Optics, 2019, 58, 4220.	0.9	6

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73	Dynamic compression of water to conditions in ice giant interiors. Scientific Reports, 2022, 12, 715.	1.6	6
74	Investigation of the temperature in dense carbon near the solid-liquid phase transition between 100ÂGPa and 200ÂGPa with spectrally resolved X-ray scattering. High Energy Density Physics, 2019, 32, 56-62.	0.4	5
75	Proton Bunch Self-Modulation in Plasma with Density Gradient. Physical Review Letters, 2020, 125, 264801.	2.9	5
76	Long-range propagation of ultrafast ionizing laser pulses in a resonant nonlinear medium. Physical Review A, 2021, 104, .	1.0	4
77	Phase-Coherent Injection-Seeded Soft X-ray Lasers at Wavelengths Down to 132 nm. Optics and Photonics News, 2008, 19, 29.	0.4	3
78	Simulation and experimental study of proton bunch self-modulation in plasma with linear density gradients. Physical Review Accelerators and Beams, 2021, 24, .	0.6	3
79	Experimental study of extended timescale dynamics of a plasma wakefield driven by a self-modulated proton bunch. Physical Review Accelerators and Beams, 2021, 24, .	0.6	3
80	Impact of free electron degeneracy on collisional rates in plasmas. Physical Review Research, 2019, 1, .	1.3	3
81	Cascaded Stokes polarization conversion in cubic Raman crystals. Optics Express, 2021, 29, 291.	1.7	3
82	Observation of Fundamental Mechanisms in Compression-Induced Phase Transformations Using Ultrafast X-ray Diffraction. Jom, 2021, 73, 2185-2193.	0.9	2
83	Tunable High Harmonic Generation driven by a Visible Optical Parametric Amplifier. EPJ Web of Conferences, 2013, 41, 01002.	0.1	1
84	KGW and diamond picosecond visible Raman lasers. , 2010, , .		1
85	Cerium lasers generate ultrafast deep ultraviolet pulses. , 2010, , .		1
86	Monolithically integrated widely tunable single-frequency diamond Raman lasers. , 2021, , .		1
87	Propagation of broadband coherent light through LIPSS-based metasurfaces in diamond. Optical Materials Express, 2022, 12, 2415.	1.6	1
88	High brightness injection-seeded table-top soft x-ray laser using a dense plasma amplifier. , 2007, , .		0
89	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, , .	0.3	0
90	High-brightness tabletop soft X-ray lasers at high repetition rate: injection-seeding of solid target plasma amplifiers and other developments. , 2007, , .		0

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91	High brightness injection-seeded table-top soft x-ray laser using a dense plasma amplifier. , 2007, , .		0
92	Continuous-wave mode locked yellow Raman laser at 559 nm based on a synchronously pumped KGW crystal. , 2009, , .		0
93	Continuous-wave and picosecond mode-locked output from an ultra-violet Ce:LiCAF laser. , 2009, , .		0
94	Diamond Raman Lasers. , 2010, , .		0
95	High-harmonic generation using a kHz, 2.1-µm OPCPA pumped by a ps cryogenic Yb:YAG amplifier. , 2012, , .		0
96	High energy and power cryogenic composite-thin-disk Yb:YAG laser. , 2013, , .		0
97	Mask-less lithography of diamond films using shaped ultrafast UV pulses. , 2017, , .		0
98	Summary report of working group 8: Advanced beam and laser facilities and technology. AIP Conference Proceedings, 2017, , .	0.3	0
99	Volume polarization gratings inscribed in glass with femtosecond lasers. , 2017, , .		0
100	Ultrafast X-ray Diffraction Study of a Shock-Compressed Iron Meteorite above 100 GPa. Minerals (Basel, Switzerland), 2021, 11, 567.	0.8	0
101	Phase coherent, injection-seeded table-top soft x-ray lasers at wavelengths down to 13.9 nm. , 2008, , .		0
102	Generation of a 1 Picosecond Soft X-Ray Laser Pulses from an Injection-Seeded Plasma Amplifier. , 2009, , .		0
103	High Coherence Injection-Seeded Table-Top Soft X-Ray Lasers at Wavelengths Down to 13.2 nm. Springer Proceedings in Physics, 2009, , 125-133.	0.1	0
104	Pulse compression dynamics in synchronously pumped continuous wave mode-locked Raman oscillators. , 2010, , .		0
105	Picosecond visible Raman lasers. , 2010, , .		0
106	Efficiency Scaling of High Harmonic Generation driven by a tunable Optical Parametric Amplifier in the Visible. , 2012, , .		0
107	Wavelength scaling of hollow-core fiber compressor design parameters. , 2012, , .		0
108	Scaling of High Harmonic Generation with Visible Driver Wavelengths. , 2012, , .		0

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109	Wavelength scaling of high-harmonic generation efficiency close to the multiphoton ionization regime. , 2013, , .		0
110	Highly efficient THz pulse generation from optical rectification in cryogenically cooled lithium niobate. , 2013, , .		0
111	Ultrafast Imaging of Shocked Material Dynamics with X-ray Fee Electron Laser Pulses. , 2014, , .		0
112	Imaging shock wave dynamics at the nanometer scale with an X-ray free electron laser. , 2016, , .		0
113	Continuously tunable diamond Raman laser for resonance ionization experiments at CERN. , 2019, , .		0
114	Enabling the use of Raman lasers for spectroscopy: continuous tunability, narrow linewidth and efficient cascading in diamond. , 2020, , .		0
115	Spectral and polarization effects in cascaded narrow linewidth diamond Raman lasers. , 2020, , .		0
116	Analysis of proton bunch parameters in the AWAKE experiment. Journal of Instrumentation, 2021, 16, P11031.	0.5	0
117	Efficient linewidth compression to the Fourier limit via resonant phonon interaction in diamond. , 2021, , .		0