

# J A PÃ©rez-HernÃ¡ndez

## List of Publications by Year in descending order

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86  
papers

1,875  
citations

331670

21  
h-index

265206

42  
g-index

88  
all docs

88  
docs citations

88  
times ranked

1714  
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards a direct measurement of the quantum-vacuum Lagrangian coupling coefficients using two counterpropagating super-intense laser pulses. <i>New Journal of Physics</i> , 2022, 24, 025010.	2.9	5
2	Implementation of a thin, flat water target capable of high-repetition-rate MeV-range proton acceleration in a high-power laser at the CLPU. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 054003.	2.1	11
3	Angular-Resolved Thomson Parabola Spectrometer for Laser-Driven Ion Accelerators. <i>Sensors</i> , 2022, 22, 3239.	3.8	3
4	Proton stopping measurements at low velocity in warm dense carbon. <i>Nature Communications</i> , 2022, 13, .	12.8	13
5	Observation of tunable parametric x-ray radiation emitted by laser-plasma electron beams interacting with crystalline structures. <i>Physical Review Accelerators and Beams</i> , 2022, 25, .	1.6	2
6	Integrated quantitative PIXE analysis and EDX spectroscopy using a laser-driven particle source. <i>Science Advances</i> , 2021, 7, .	10.3	19
7	A quasi-monoenergetic short time duration compact proton source for probing high energy density states of matter. <i>Scientific Reports</i> , 2021, 11, 6881.	3.3	9
8	The Role of the Ponderomotive Force in High Field Experiments. <i>Topics in Applied Physics</i> , 2021, , 149-177.	0.8	0
9	Above-threshold ionization driven by few-cycle spatially bounded inhomogeneous laser fields. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 065403.	1.5	5
10	Innovative education and training in high power laser plasmas (PowerLaPs) for plasma physics, high power laser matter interactions and high energy density physics: experimental diagnostics and simulations. <i>High Power Laser Science and Engineering</i> , 2020, 8, .	4.6	6
11	Soft X-ray measurements with a gas detector coupled to microchips in laser-plasma experiments at VEGA-2. <i>Journal of Instrumentation</i> , 2020, 15, C02006-C02006.	1.2	0
12	Innovative education and training in high power laser plasmas (PowerLaPs) for plasma physics, high power laser matter interactions and high energy density physics: experimental diagnostics and simulations “ CORRIGENDUM. <i>High Power Laser Science and Engineering</i> , 2020, 8, .	4.6	1
13	Off-axis spiral phase mirrors for generating high-intensity optical vortices. <i>Optics Letters</i> , 2020, 45, 2187.	3.3	31
14	Nonlinear Thomson Scattering: a Tool for Assessing Relativistic Intensities and Beyond. , 2020, , .		0
15	Characterization of Nonlinear, Relativistic Thomson Scattering. , 2020, , .		0
16	Precision measurement of the quantum vacuum with petawatt-class lasers. , 2020, , .		0
17	Symphony on strong field approximation. <i>Reports on Progress in Physics</i> , 2019, 82, 116001.	20.1	123
18	Development of an adjustable Kirkpatrick-Baez microscope for laser driven x-ray sources. <i>Review of Scientific Instruments</i> , 2019, 90, 063704.	1.3	1

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19	Generation of high energy laser-driven electron and proton sources with the 200 TW system VEGA 2 at the Centro de Laseres Pulsados. High Power Laser Science and Engineering, 2019, 7, .	4.6	31
20	A 2D scintillator-based proton detector for high repetition rate experiments. High Power Laser Science and Engineering, 2019, 7, .	4.6	20
21	Towards an in situ, full-power gauge of the focal-volume intensity of petawatt-class lasers. Optics Express, 2019, 27, 30020.	3.4	24
22	First experimental steps toward an in situ gauge for direct measurement of relativistic intensities. , 2019, , .		0
23	Possibility of an in situ gauge for PW relativistic intensities (Conference Presentation). , 2019, , .		0
24	High-order harmonic generation driven by inhomogeneous plasmonics fields spatially bounded: influence on the cut-off law. Journal of Optics (United Kingdom), 2018, 20, 034002.	2.2	15
25	Double-Electron Ionization Driven by Inhomogeneous Fields. , 2018, , 491-508.		0
26	Ion-beam lithography: A promising technique for the patterning of graphene oxide foil. AIP Conference Proceedings, 2018, , .	0.4	2
27	Synthesis of ultrashort laser pulses for high-order harmonic generation. Physical Review A, 2018, 98, .	2.5	5
28	Wannier-Bloch approach to localization in high-order harmonic generation in solids. , 2018, , .		0
29	Anomalies observed in the cut off law of High-order Harmonics Generation. Are spatially inhomogeneous fields the key for this change?. , 2018, , .		0
30	Attosecond physics at the nanoscale. Reports on Progress in Physics, 2017, 80, 054401.	20.1	274
31	Double-electron ionization driven by inhomogeneous fields. Applied Physics B: Lasers and Optics, 2017, 123, 1.	2.2	4
32	High-order-harmonic generation in atomic and molecular systems. Physical Review A, 2017, 95, .	2.5	28
33	Wannier-Bloch Approach to Localization in High-Harmonics Generation in Solids. Physical Review X, 2017, 7, .	8.9	83
34	Emergence of a Higher Energy Structure in Strong Field Ionization with Inhomogeneous Electric Fields. Physical Review Letters, 2017, 119, 053204.	7.8	19
35	High-order harmonic generation in polyatomic systems. Journal of Physics: Conference Series, 2017, 875, 032014.	0.4	0
36	Commissioning experiments of VEGA-2 at Centro de LÃ¡sers Pulsados (CLPU). , 2017, , .		2

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37	Active tailoring of nanoantenna plasmonic fields using few-cycle laser pulses. Physical Review A, 2016, 93, .	2.5	8
38	High-order harmonic generation driven by chirped laser pulses induced by linear and non linear phenomena. European Physical Journal D, 2016, 70, 1.	1.3	18
39	Extending the high-order harmonic generation cutoff by means of self-phase-modulated chirped pulses. Laser Physics Letters, 2016, 13, 115303.	1.4	13
40	Extending the high-order harmonic generation cutoff by means of self-phase-modulated chirped pulses. , 2016, , .		0
41	Strong-field plasmonic photoemission in the mid-IR at $1\text{ GW/cm}^2$ intensity. Scientific Reports, 2015, 5, 7584.	3.3	34
42	Carrier-wave Rabi flopping signatures in high-order harmonic generation. Journal of Physics: Conference Series, 2015, 635, 092032.	0.4	0
43	Carrier-Wave Rabi-Flopping Signatures in High-Order Harmonic Generation for Alkali Atoms. Physical Review Letters, 2015, 114, 143902.	7.8	20
44	Strong field nanoplasmonic photoemission in the mid-IR at $1\text{ GW/cm}^2$ intensity. , 2015, , .		0
45	Ultraviolet surprise: Efficient soft x-ray high-harmonic generation in multiply ionized plasmas. Science, 2015, 350, 1225-1231.	12.6	165
46	High-order harmonic generation driven by plasmonic fields: a new route towards the generation of UV and XUV photons?. Journal of Physics: Conference Series, 2015, 601, 012001.	0.4	9
47	Bright High Order Harmonic Generation in a Multiply Ionized Plasma up to the Water Window. , 2014, , .		0
48	High-order-harmonic generation driven by metal nanotip photoemission: Theory and simulations. Physical Review A, 2014, 89, .	2.5	17
49	Laser-matter phenomena driven by plasmonic near-fields. , 2014, , .		0
50	ClassSTRONG: Classical simulations of strong field processes. Computer Physics Communications, 2014, 185, 398-406.	7.5	21
51	High-order harmonic generation at high laser intensities beyond the tunnel regime. European Physical Journal D, 2014, 68, 1.	1.3	2
52	Coherent XUV generation driven by sharp metal tips photoemission. European Physical Journal D, 2014, 68, 1.	1.3	10
53	Harmonic emission beyond the Carbon K-edge using spatially and temporally synthesized laser field. , 2014, , .		1
54	Breakdown of dipole approximation in strong field ionization. , 2014, , .		0

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55	Zeptosecond High Harmonic keV X-Ray Waveforms Driven by Midinfrared Laser Pulses. Physical Review Letters, 2013, 111, 033002.	7.8	123
56	Polymer/surfactant assisted self-assembly of nanoparticles into Langmuir-Blodgett films. Materials Chemistry and Physics, 2013, 138, 286-294.	4.0	16
57	High-order-harmonic generation by enhanced plasmonic near-fields in metal nanoparticles. Physical Review A, 2013, 87, .	2.5	74
58	Electron-momentum distributions and photoelectron spectra of atoms driven by an intense spatially inhomogeneous field. Physical Review A, 2013, 87, .	2.5	38
59	High energy photoelectron emission from gases using plasmonic enhanced near-fields. Laser Physics Letters, 2013, 10, 105302.	1.4	22
60	Beyond carbon K-edge harmonic emission using spatially and temporally synthesized laser field. , 2013, , .		0
61	Ultrahigh-Efficiency High Harmonic Generation Driven by UV Lasers. , 2013, , .		4
62	Beyond Carbon $K$ -Edge Harmonic Emission Using a Spatial and Temporal Synthesized Laser Field. Physical Review Letters, 2013, 110, 053001.	7.8	108
63	Comment on "On the dipole, velocity and acceleration forms in high-order harmonic generation from a single atom or molecule". Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 028001.	1.5	2
64	Unified Microscopic-Macroscopic Picture of High Harmonic Generation from the VUV to the keV X-ray Region. , 2012, , .		0
65	Above-threshold ionization by few-cycle spatially inhomogeneous fields. Physical Review A, 2012, 86, .	2.5	41
66	Functionalization of Reduced Graphite Oxide Sheets with a Zwitterionic Surfactant. ChemPhysChem, 2012, 13, 3682-3690.	2.1	33
67	Ultraviolet and infrared femtosecond laser induced periodic surface structures on thin polymer films. Applied Physics Letters, 2012, 100, .	3.3	71
68	Valley Structure in the Harmonic Efficiency at Ultra-high Laser Intensities. , 2012, , .		0
69	Sources of VUV radiation by high harmonic generation and their characteristics. , 2011, , .		0
70	Valley in the efficiency of the high-order harmonic yield at ultra-high laser intensities. Optics Express, 2011, 19, 19430.	3.4	11
71	Harmonic generation beyond the Strong-Field Approximation: Phase and temporal description. Laser Physics, 2010, 20, 1044-1050.	1.2	22
72	High-order harmonic propagation in gases within the discrete dipole approximation. Physical Review A, 2010, 82, .	2.5	89

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73	Langmuir and Langmuir~Blodgett Films of a Maleic Anhydride Derivative: Effect of Subphase Divalent Cations. Langmuir, 2010, 26, 14556-14562.	3.5	20
74	Mid-infrared high-order harmonic yield scaling: Where to look and what to see. , 2009, , .		0
75	Controlling high-order harmonic cut-off extension using two delayed pulses of the same colour. , 2009, , .		0
76	Extension of the cut-off in high-harmonic generation using two delayed pulses of the same colour. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 134004.	1.5	21
77	A quantitative-accurate S-matrix model for the description high-order harmonic generation. European Physical Journal: Special Topics, 2009, 175, 21-24.	2.6	0
78	S-Matrix theory for the high-order harmonic generation beyond the Strong-Field Approximation. Laser Physics, 2009, 19, 1581-1585.	1.2	6
79	Harmonic generation beyond the Strong-Field Approximation: the physics behind the short-wave-infrared scaling laws. Optics Express, 2009, 17, 9891.	3.4	72
80	Propagation of terawatt laser pulses in the air. Applied Physics A: Materials Science and Processing, 2008, 92, 865-871.	2.3	3
81	A quantitative-accurate S-Matrix model for the description High-Order Harmonic Generation. , 2007, , .		0
82	Time domain effects during spontaneous self-channelling of light in air below the collapse threshold. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 4433-4442.	1.5	0
83	Quantum description of the high-order harmonic generation in multiphoton and tunneling regimes. Physical Review A, 2007, 76, .	2.5	15
84	Nonlinear effects in the propagation of short laser pulses in air. , 2007, , .		1
85	A quantitative S-Matrix approach to high-order harmonic generation from multiphoton to tunneling regimes.. Optics Express, 2007, 15, 3629.	3.4	15
86	Non-linear Young's double-slit experiment. Optics Express, 2006, 14, 2817.	3.4	9