

Massimo Petrarca

List of Publications by Year in descending order

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83
papers

1,263
citations

394421

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32
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86
all docs

86
docs citations

86
times ranked

1298
citing authors

#	ARTICLE	IF	CITATIONS
1	Strong nonlinear terahertz response induced by Dirac surface states in Bi ₂ Se ₃ topological insulator. Nature Communications, 2016, 7, 11421.	12.8	124
2	THz Pulsed Imaging in Biomedical Applications. Condensed Matter, 2020, 5, 25.	1.8	70
3	White light generation over three octaves by femtosecond filament at 390 nm in argon. Optics Letters, 2012, 37, 3456.	3.3	67
4	Self-amplified spontaneous emission for a single pass free-electron laser. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	60
5	Direct Measurement of the Double Emittance Minimum in the Beam Dynamics of the Sparc High-Brightness Photoinjector. Physical Review Letters, 2007, 99, 234801.	7.8	59
6	Mid-infrared laser filamentation in molecular gases. Optics Letters, 2013, 38, 3194.	3.3	53
7	High brightness electron beam emittance evolution measurements in an rf photoinjector. Physical Review Special Topics: Accelerators and Beams, 2008, 11, .	1.8	39
8	The SPARC_LAB Thomson source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 237-242.	1.6	36
9	Beam manipulation with velocity bunching for PWFA applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 17-23.	1.6	35
10	Femtosecond dynamics of energetic electrons in high intensity laser-matter interactions. Scientific Reports, 2016, 6, 35000.	3.3	32
11	Laser-induced plasma cloud interaction and ice multiplication under cirrus cloud conditions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10106-10110.	7.1	28
12	Measurements of fluence profiles in femtosecond laser filaments in air. Optics Letters, 2016, 41, 4751.	3.3	26
13	Femtosecond timing-jitter between photo-cathode laser and ultra-short electron bunches by means of hybrid compression. New Journal of Physics, 2016, 18, 083033.	2.9	26
14	Laser filament-induced aerosol formation. Atmospheric Chemistry and Physics, 2013, 13, 4593-4604.	4.9	25
15	Trace-space reconstruction of low-emittance electron beams through betatron radiation in laser-plasma accelerators. Physical Review Accelerators and Beams, 2017, 20, .	1.6	25
16	White-light femtosecond Lidar at 100 W power level. Applied Physics B: Lasers and Optics, 2014, 114, 319-325.	2.2	23
17	Resonant plasma excitation by single-cycle THz pulses. Scientific Reports, 2018, 8, 1052.	3.3	22
18	Terahertz Spectroscopic Analysis in Protein Dynamics: Current Status. Radiation, 2022, 2, 100-123.	1.4	21

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19	High-power third-harmonic flat pulse laser generation. <i>Optics Letters</i> , 2006, 31, 2885.	3.3	19
20	Multijoule scaling of laser-induced condensation in air. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	19
21	Performance Evaluation of a THz Pulsed Imaging System: Point Spread Function, Broadband THz Beam Visualization and Image Reconstruction. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 562.	2.5	19
22	Tailoring of Highly Intense THz Radiation Through High Brightness Electron Beams Longitudinal Manipulation. <i>Applied Sciences (Switzerland)</i> , 2016, 6, 56.	2.5	17
23	Sub-picosecond snapshots of fast electrons from high intensity laser-matter interactions. <i>Optics Express</i> , 2016, 24, 29512.	3.4	17
24	Higher-order Kerr improve quantitative modeling of laser filamentation. <i>Optics Letters</i> , 2012, 37, 4347.	3.3	16
25	Laser-induced condensation by ultrashort laser pulses at 248â€‰nm. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	16
26	Characterization of volatile organic compounds (VOCs) in their liquid-phase by terahertz time-domain spectroscopy. <i>Biomedical Optics Express</i> , 2020, 11, 1.	2.9	16
27	Ultrafast evolution of electric fields from high-intensity laser-matter interactions. <i>Scientific Reports</i> , 2018, 8, 3243.	3.3	15
28	Terahertz-based retrieval of the spectral phase and amplitude of ultrashort laser pulses. <i>Optics Letters</i> , 2018, 43, 783.	3.3	15
29	Broadband Anisotropic Optical Properties of the Terahertz Generator HMQ-TMS Organic Crystal. <i>Condensed Matter</i> , 2020, 5, 47.	1.8	15
30	Fabrication and spectroscopic characterization of graphene transparent electrodes on flexible cyclo-olefin substrates for terahertz electro-optic applications. <i>Nanotechnology</i> , 2020, 31, 364006.	2.6	15
31	Strontium Substituted Tricalcium Phosphate Bone Cement: Short and Longâ€‰Term Timeâ€‰Resolved Studies and In Vitro Properties. <i>Advanced Materials Interfaces</i> , 2022, 9, .	3.7	15
32	Seeding experiments at SPARC. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 593, 132-136.	1.6	14
33	Beam manipulation for resonant plasma wakefield acceleration. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2017, 865, 139-143.	1.6	14
34	Stability study for matching in laser driven plasma acceleration. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 67-72.	1.6	13
35	Diagnosing plasmas with wideband terahertz pulses. <i>Optics Letters</i> , 2019, 44, 1011.	3.3	13
36	The Potential of EuPRAXIA@SPARC_LAB for Radiation Based Techniques. <i>Condensed Matter</i> , 2019, 4, 30.	1.8	12

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37	Simultaneous elliptically and radially polarized THz from one-color laser-induced plasma filament. <i>New Journal of Physics</i> , 2021, 23, 063048.	2.9	12
38	Fast phase switching within the bunch train of the PHIN photo-injector at CERN using fiber-optic modulators on the drive laser. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 659, 1-8.	1.6	11
39	Electro-Optical Detection of Coherent Radiation Induced by Relativistic Electron Bunches in the Near and Far Fields. <i>Physical Review Applied</i> , 2018, 9, .	3.8	11
40	Modeling and diagnostics for plasma discharge capillaries. <i>Physical Review E</i> , 2019, 100, 053202.	2.1	11
41	Beam-based sub-THz source at the CERN linac electron accelerator for research facility. <i>Physical Review Accelerators and Beams</i> , 2019, 22, .	1.6	11
42	Simple scheme for ultraviolet time-pulse shaping. <i>Applied Optics</i> , 2007, 46, 4959.	2.1	10
43	Numerical and analytical models to study the laser-driven plasma perturbation in a dielectric gas-filled capillary waveguide. <i>Optics Letters</i> , 2016, 41, 4233.	3.3	10
44	Study of the Powerful Nd:YLF Laser Amplifiers for the CTF3 Photoinjectors. <i>IEEE Journal of Quantum Electronics</i> , 2011, 47, 306-313.	1.9	9
45	IRIDE: Interdisciplinary research infrastructure based on dual electron linacs and lasers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 740, 138-146.	1.6	9
46	Universal threshold for femtosecond laser ablation with oblique illumination. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	9
47	Laser pulse shaping for high gradient accelerators. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 446-451.	1.6	9
48	First measurements of betatron radiation at FLAME laser facility. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 402, 388-392.	1.4	9
49	Single-shot non-intercepting profile monitor of plasma-accelerated electron beams with nanometric resolution. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	9
50	The Project Plasmonx for Plasma Acceleration Experiments and A Thomson X-Ray Source at SPARC. , 0, , .		8
51	Laser-capillary interaction for the EXIN project. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 309-313.	1.6	8
52	Terahertz continuous wave spectroscopy: a portable advanced method for atmospheric gas sensing. <i>Optics Express</i> , 2022, 30, 19005.	3.4	7
53	Production of long bunch trains with 4.5×10^{14} electrons per bunch and total charge using a photoinjector. <i>Physical Review Special Topics: Accelerators and Beams</i> . 2012, 15, .	1.8	6
54	Characterization of X-ray radiation from solid Sn target irradiated by femtosecond laser pulses in the presence of air plasma sparks. <i>Laser and Particle Beams</i> , 2016, 34, 533-538.	1.0	6

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55	Saturation regime of THz generation in nonlinear crystals by pumps with arbitrary spectral modulations. <i>Optics Letters</i> , 2020, 45, 1619.	3.3	6
56	Selection rules for the orbital angular momentum of optically produced THz radiation. <i>Optics Letters</i> , 2021, 46, 1514.	3.3	5
57	Tuning of betatron radiation in laser-plasma accelerators via multimodal laser propagation through capillary waveguides. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	4
58	Temporal E-Beam Shaping in an S-Band Accelerator. , 0, , .		3
59	Drive laser system for sparc photoinjector. , 2007, , .		3
60	Experimental results with the SPARC emittance-meter. , 2007, , .		3
61	Generation and characterization of ultra-short electron beams for single spike infrared FEL radiation at SPARC_LAB. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2017, 865, 43-46.	1.6	3
62	Comparison between sparc e-meter measurements and simulations. , 2007, , .		2
63	PHIN photo-injector as the CLIC drive beam source. <i>Journal of Physics: Conference Series</i> , 2012, 347, 012036.	0.4	2
64	Intense terahertz pulses from SPARC_LAB coherent radiation source. <i>Proceedings of SPIE</i> , 2015, , .	0.8	2
65	The SPARC_LAB femtosecond synchronization for electron and photon pulsed beams. <i>Proceedings of SPIE</i> , 2015, , .	0.8	2
66	Superfilamentation in air reconstructed by transversal interferometry. <i>Physical Review A</i> , 2019, 100, .	2.5	2
67	Diffraction shadowing of coherent polarization radiation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2021, 391, 127135.	2.1	2
68	Status of the SPARC Project. , 0, , .		1
69	Status of the sparc-x project. , 2007, , .		1
70	Mid-Infrared femtosecond filament and three octaves continuum generation in gases. <i>EPJ Web of Conferences</i> , 2013, 41, 10003.	0.3	1
71	Pre-wave zone studies of Coherent Transition and Diffraction Radiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015, 355, 144-149.	1.4	1
72	Operational experience on the generation and control of high brightness electron bunch trains at SPARC-LAB. , 2015, , .		1

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73	Intensity and phase retrieval of IR laser pulse by THz-based measurement and THz waveform modulation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 204-207.	1.6	1
74	Ray optics hamiltonian approach to relativistic self focusing of ultraintense lasers in underdense plasmas. EPJ Web of Conferences, 2018, 167, 01003.	0.3	1
75	<title>Production of temporally flat top UV laser pulses for SPARC photo-injector</title>. , 2007, , .		0
76	<title>Future seeding experiments at SPARC</title>. , 2007, , .		0
77	Supercontinuum Generation by Mid-IR femtosecond Filaments in Molecular Gases. , 2013, , .		0
78	Laser Filament Induced Water Condensation. EPJ Web of Conferences, 2013, 41, 12008.	0.3	0
79	Higher-order Kerr effects improve quantitative modelling of harmonics generation and laser filamentation. EPJ Web of Conferences, 2013, 41, 12007.	0.3	0
80	Laser Filament-induced Ice Multiplication under Cirrus Cloud Conditions. , 2014, , .		0
81	Towards the detection of nanometric emittances in plasma accelerators. Journal of Instrumentation, 2019, 14, C02004-C02004.	1.2	0
82	Measurements of fluence profiles in femtosecond laser sparks and superfilaments in air. Physical Review A, 2018, 97, .	2.5	0
83	Plasma diagnostic by Terahertz pulses. , 2019, , .		0