Massimo Petrarca

List of Publications by Year
in descending order

83 papers	1,263 citations	394421 19 h-index	414414 32 g-index
86 all docs	86 docs citations	86 times ranked	1298 citing authors

#	Article	IF	Citations
1	Terahertz Spectroscopic Analysis in Protein Dynamics: Current Status. Radiation, 2022, 2, 100-123.	1.4	21
2	Terahertz continuous wave spectroscopy: a portable advanced method for atmospheric gas sensing. Optics Express, 2022, 30, 19005.	3.4	7
3	Strontium Substituted Tricalcium Phosphate Bone Cement: Short and Longâ€Term Timeâ€Resolved Studies and In Vitro Properties. Advanced Materials Interfaces, 2022, 9, .	3.7	15
4	Selection rules for the orbital angular momentum of optically produced THz radiation. Optics Letters, 2021, 46, 1514.	3.3	5
5	Diffractive shadowing of coherent polarization radiation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 391, 127135.	2.1	2
6	Simultaneous elliptically and radially polarized THz from one-color laser-induced plasma filament. New Journal of Physics, 2021, 23, 063048.	2.9	12
7	Performance Evaluation of a THz Pulsed Imaging System: Point Spread Function, Broadband THz Beam Visualization and Image Reconstruction. Applied Sciences (Switzerland), 2021, 11, 562.	2.5	19
8	Broadband Anisotropic Optical Properties of the Terahertz Generator HMQ-TMS Organic Crystal. Condensed Matter, 2020, 5, 47.	1.8	15
9	Fabrication and spectroscopic characterization of graphene transparent electrodes on flexible cyclo-olefin substrates for terahertz electro-optic applications. Nanotechnology, 2020, 31, 364006.	2.6	15
10	THz Pulsed Imaging in Biomedical Applications. Condensed Matter, 2020, 5, 25.	1.8	70
11	Characterization of volatile organic compounds (VOCs) in their liquid-phase by terahertz time-domain spectroscopy. Biomedical Optics Express, 2020, 11, 1.	2.9	16
12	Saturation regime of THz generation in nonlinear crystals by pumps with arbitrary spectral modulations. Optics Letters, 2020, 45, 1619.	3.3	6
13	Towards the detection of nanometric emittances in plasma accelerators. Journal of Instrumentation, 2019, 14, C02004-C02004.	1.2	0
14	The Potential of EuPRAXIA@SPARC_LAB for Radiation Based Techniques. Condensed Matter, 2019, 4, 30.	1.8	12
15	Modeling and diagnostics for plasma discharge capillaries. Physical Review E, 2019, 100, 053202.	2.1	11
16	Superfilamentation in air reconstructed by transversal interferometry. Physical Review A, 2019, 100, .	2.5	2
17	Beam-based sub-THz source at the CERN linac electron accelerator for research facility. Physical Review Accelerators and Beams, 2019, 22, .	1.6	11
18	Diagnosing plasmas with wideband terahertz pulses. Optics Letters, 2019, 44, 1011.	3.3	13

#	Article	IF	Citations
19	Plasma diagnostic by Terahertz pulses. , 2019, , .		0
20	Ultrafast evolution of electric fields from high-intensity laser-matter interactions. Scientific Reports, 2018, 8, 3243.	3.3	15
21	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
22	Resonant plasma excitation by single-cycle THz pulses. Scientific Reports, 2018, 8, 1052.	3.3	22
23	Electro-Optical Detection of Coherent Radiation Induced by Relativistic Electron Bunches in the Near and Far Fields. Physical Review Applied, 2018, 9, .	3.8	11
24	Ray optics hamiltonian approach to relativistic self focusing of ultraintense lasers in underdense plasmas. EPJ Web of Conferences, 2018, 167, 01003.	0.3	1
25	Terahertz-based retrieval of the spectral phase and amplitude of ultrashort laser pulses. Optics Letters, 2018, 43, 783.	3.3	15
26	Measurements of fluence profiles in femtosecond laser sparks and superfilaments in air. Physical Review A, 2018, 97, .	2.5	0
27	Tuning of betatron radiation in laser-plasma accelerators via multimodal laser propagation through capillary waveguides. Physics of Plasmas, 2017, 24, .	1.9	4
28	First measurements of betatron radiation at FLAME laser facility. Nuclear Instruments & Methods in Physics Research B, 2017, 402, 388-392.	1.4	9
29	Beam manipulation for resonant plasma wakefield acceleration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 865, 139-143.	1.6	14
30	Generation and characterization of ultra-short electron beams for single spike infrared FEL radiation at SPARC_LAB. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 865, 43-46.	1.6	3
31	Single-shot non-intercepting profile monitor of plasma-accelerated electron beams with nanometric resolution. Applied Physics Letters, 2017, 111, .	3.3	9
32	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
33	Tailoring of Highly Intense THz Radiation Through High Brightness Electron Beams Longitudinal Manipulation. Applied Sciences (Switzerland), 2016, 6, 56.	2.5	17
34	Sub-picosecond snapshots of fast electrons from high intensity laser-matter interactions. Optics Express, 2016, 24, 29512.	3.4	17
35	Measurements of fluence profiles in femtosecond laser filaments in air. Optics Letters, 2016, 41, 4751.	3.3	26
36	Characterization of X-ray radiation from solid Sn target irradiated by femtosecond laser pulses in the presence of air plasma sparks. Laser and Particle Beams, 2016, 34, 533-538.	1.0	6

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37	Universal threshold for femtosecond laser ablation with oblique illumination. Applied Physics Letters, 2016, 109, .	3.3	9
38	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
39	Strong nonlinear terahertz response induced by Dirac surface states in Bi2Se3 topological insulator. Nature Communications, 2016, 7, 11421.	12.8	124
40	Femtosecond dynamics of energetic electrons in high intensity laser-matter interactions. Scientific Reports, 2016, 6, 35000.	3.3	32
41	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
42	Stability study for matching in laser driven plasma acceleration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 67-72.	1.6	13
43	Laser pulse shaping for high gradient accelerators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 446-451.	1.6	9
44	Laserâ€“capillary interaction for the EXIN project. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 309-313.	1.6	8
45	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
46	Numerical and analytical models to study the laser-driven plasma perturbation in a dielectric gas-filled capillary waveguide. Optics Letters, 2016, 41, 4233.	3.3	10
47	Pre-wave zone studies of Coherent Transition and Diffraction Radiation. Nuclear Instruments & Methods in Physics Research B, 2015, 355, 144-149.	1.4	1
48	Intense terahertz pulses from SPARC_LAB coherent radiation source. Proceedings of SPIE, 2015, , .	0.8	2
49	The SPARC_LAB femtosecond synchronization for electron and photon pulsed beams. Proceedings of SPIE, 2015, , .	0.8	2
50	Operational experience on the generation and control of high brightness electron bunch trains at SPARC-LAB. , 2015, , .		1
51	Laser Filament-induced Ice Multiplication under Cirrus Cloud Conditions. , 2014, , .		0
52	IRIDE: Interdisciplinary research infrastructure based on dual electron linacs and lasers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 740, 138-146.	1.6	9
53	White-light femtosecond Lidar at 100ÂTW power level. Applied Physics B: Lasers and Optics, 2014, 114, 319-325.	2.2	23
54	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

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55	Laser-induced condensation by ultrashort laser pulses at 248â€‰nm. Applied Physics Letters, 2013, 102, .	3.3	16
56	Supercontinuum Generation by Mid-IR femtosecond Filaments in Molecular Gases. , 2013, , .		0
57	Mid-infrared laser filamentation in molecular gases. Optics Letters, 2013, 38, 3194.	3.3	53
58	Mid-Infrared femtosecond filament and three octaves continuum generation in gases. EPJ Web of Conferences, 2013, 41, 10003.	0.3	1
59	Laser filament-induced aerosol formation. Atmospheric Chemistry and Physics, 2013, 13, 4593-4604.	4.9	25
60	Laser Filament Induced Water Condensation. EPJ Web of Conferences, 2013, 41, 12008.	0.3	0
61	Higher-order Kerr effects improve quantitative modelling of harmonics generation and laser filamentation. EPJ Web of Conferences, 2013, 41, 12007.	0.3	0
62	White light generation over three octaves by femtosecond filament at 39ÂÂµm in argon. Optics Letters, 2012, 37, 3456.	3.3	67
63	Higher-order Kerr improve quantitative modeling of laser filamentation. Optics Letters, 2012, 37, 4347.	3.3	16
64	Production of long bunch trains with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4.5</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>Î¼</mml:mi><mml:mi mathvariant="normal">C</mml:mi></mml:math>total charge using a photoinjector. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	6
65	PHIN photo-injector as the CLIC drive beam source. Journal of Physics: Conference Series, 2012, 347, 012036.	0.4	2
66	Multijoule scaling of laser-induced condensation in air. Applied Physics Letters, 2011, 99, .	3.3	19
67	Fast phase switching within the bunch train of the PHIN photo-injector at CERN using fiber-optic modulators on the drive laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 659, 1-8.	1.6	11
68	Study of the Powerful Nd:YLF Laser Amplifiers for the CTF3 Photoinjectors. IEEE Journal of Quantum Electronics, 2011, 47, 306-313.	1.9	9
69	Self-amplified spontaneous emission for a single pass free-electron laser. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	60
70	Seeding experiments at SPARC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 593, 132-136.	1.6	14
71	High brightness electron beam emittance evolution measurements in an rf photoinjector. Physical Review Special Topics: Accelerators and Beams, 2008, 11, .	1.8	39
72	Status of the sparc-x project. , 2007, , .		1

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73	Comparison between sparc e-meter measurements and simulations. , 2007, , .		2
74	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
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	Simple scheme for ultraviolet time-pulse shaping. Applied Optics, 2007, 46, 4959.	2.1	10
78	Drive laser system for sparc photoinjector. , 2007, , .		3
79	Experimental results with the SPARC emittance-meter. , 2007, , .		3
80	High-power third-harmonic flat pulse laser generation. Optics Letters, 2006, 31, 2885.	3.3	19
81	Status of the SPARC Project. , 0, , .		1
82	The Project Plasmonx for Plasma Acceleration Experiments and A Thomson X-Ray Source at SPARC. , 0, , .		8
83	Temporal E-Beam Shaping in an S-Band Accelerator. , 0, , .		3