Gianluca Sarri

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8042988/publications.pdf

Version: 2024-02-01

119 papers	3,295 citations	201674 27 h-index	155660 55 g-index
145 all docs	145 docs citations	145 times ranked	2282 citing authors

#	Article	IF	Citations
1	Plasma-based positron sources at EuPRAXIA. Plasma Physics and Controlled Fusion, 2022, 64, 044001.	2.1	4
2	High-dose femtosecond-scale gamma-ray beams for radiobiological applications. Physics in Medicine and Biology, 2022, 67, 085010.	3.0	3
3	Single particle detection system for strong-field QED experiments. New Journal of Physics, 2022, 24, 015002.	2.9	7
4	L-Shell X-Ray Conversion Yields for Laser-Irradiated Tin and Silver Foils. Laser and Particle Beams, 2022, 2022, .	1.0	0
5	Intense gamma-ray source based on focused electron beams from a laser wakefield accelerator. Applied Physics Letters, 2022, 120, .	3.3	1
6	Ultrashort, MeV-scale laser-plasma positron source for positron annihilation lifetime spectroscopy. Physical Review Accelerators and Beams, 2021, 24, .	1.6	10
7	Conceptual design report for the LUXE experiment. European Physical Journal: Special Topics, 2021, 230, 2445-2560.	2.6	89
8	A laserâ€“plasma platform for photonâ€“photon physics: the two photon Breitâ€“Wheeler process. New Journal of Physics, 2021, 23, 115006.	2.9	11
9	An investigation of the L-shell x-ray conversion efficiency for laser-irradiated tin foils. Plasma Science and Technology, 2020, 22, 045201.	1.5	2
10	Conceptual Design of a High-flux Multi-GeV Gamma-ray Spectrometer. Scientific Reports, 2020, 10, 9894.	3.3	11
11	Non-invasive characterisation of a laser-driven positron beam. Plasma Physics and Controlled Fusion, 2020, 62, 055013.	2.1	6
12	Sarri etÂal. Reply:. Physical Review Letters, 2020, 124, 179502.	7.8	1
13	Effect of precursor pH on AuNP/MWCNT nanocomposites synthesized by plasma-induced non-equilibrium electrochemistry. Journal Physics D: Applied Physics, 2020, 53, 425207.	2.8	4
14	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
15	Summary of Working Group 4: Application of compact and high-gradient accelerators. Journal of Physics: Conference Series, 2020, 1596, 012034.	0.4	0
16	EuPRAXIA â€“ a compact, cost-efficient particle and radiation source. AIP Conference Proceedings, 2019, , .	0.4	7
17	Nanoscale Hybrid Coating Enables Multifunctional Tissue Scaffold for Potential Multimodal Therapeutic Applications. ACS Applied Materials & Interfaces, 2019, 11, 27269-27278.	8.0	30
18	Single shot complete characterization of femtosecond laser pulses employing self-phase modulation. Laser Physics, 2019, 29, 085001.	1.2	0

#	Article	IF	Citations
19	Laser-Wakefield Electron Beams as Drivers of High-Quality Positron Beams and Inverse-Compton-Scattered Photon Beams. Frontiers in Physics, 2019, 7, .	2.1	11
20	Laser-driven high-quality positron sources as possible injectors for plasma-based accelerators. Scientific Reports, 2019, 9, 5279.	3.3	20
21	Quantum electrodynamics experiments with colliding petawatt laser pulses. High Power Laser Science and Engineering, 2019, 7, .	4.6	26
22	Generation of photoionized plasmas in the laboratory: Analogues to astrophysical sources. Proceedings of the International Astronomical Union, 2019, 15, 321-325.	0.0	0
23	Characterization of ultrashort laser pulses employing self-phase modulation dispersion-scan technique. Journal of Optics (United Kingdom), 2018, 20, 035502.	2.2	1
24	Experimental Evidence of Radiation Reaction in the Collision of a High-Intensity Laser Pulse with a Laser-Wakefield Accelerated Electron Beam. Physical Review X, 2018, 8, .	8.9	234
25	Measurements of self-guiding of ultrashort laser pulses over long distances. Plasma Physics and Controlled Fusion, 2018, 60, 014022.	2.1	7
26	Electrostatic shock waves in the laboratory and astrophysics: similarities and differences. Plasma Physics and Controlled Fusion, 2018, 60, 014014.	2.1	7
27	Radiation reaction studies in an all-optical set-up: experimental limitations. Journal of Modern Optics, 2018, 65, 1362-1369.	1.3	11
28	General features of experiments on the dynamics of laser-driven electronâ€“positron beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 95-101.	1.6	4
29	Cocoon formation by a mildly relativistic pair jet in unmagnetized collisionless electron-proton plasma. Physics of Plasmas, 2018, 25, .	1.9	6
30	A spectrometer for ultrashort gamma-ray pulses with photon energies greater than 10 MeV. Review of Scientific Instruments, 2018, 89, 113303.	1.3	21
31	Conditions for the onset of the current filamentation instability in the laboratory. Journal of Plasma Physics, 2018, 84, .	2.1	17
32	Experimental Signatures of the Quantum Nature of Radiation Reaction in the Field of an Ultraintense Laser. Physical Review X, 2018, 8, .	8.9	210
33	Making pions with laser light. New Journal of Physics, 2018, 20, 073008.	2.9	5
34	Expansion of a mildly relativistic hot pair cloud into an electron-proton plasma. Physics of Plasmas, 2018, 25, .	1.9	7
35	Expansion of a radially symmetric blast shell into a uniformly magnetized plasma. Physics of Plasmas, 2018, 25, .	1.9	10
36	One-dimensional thermal pressure-driven expansion of a pair cloud into an electron-proton plasma. Physics of Plasmas, 2018, 25, .	1.9	10

#	Article	IF	Citations
37	High-resolution Î¼CT of a mouse embryo using a compact laser-driven X-ray betatron source. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6335-6340.	7.1	50
38	Production of photoionized plasmas in the laboratory with x-ray line radiation. Physical Review E, 2018, 97, 063203.	2.1	10
39	Experimental Observation of Thin-shell Instability in a Collisionless Plasma. Astrophysical Journal Letters, 2017, 834, L21.	8.3	8
40	Pulse chirping effect on controlling the transverse cavity oscillations in nonlinear bubble regime. Chinese Physics B, 2017, 26, 025201.	1.4	1
41	The effect of positively chirped laser pulse on energy enhancement of proton acceleration in combinational radiation pressure and bubble regime. Physics of Plasmas, 2017, 24, .	1.9	3
42	Expansion of a radial plasma blast shell into an ambient plasma. Physics of Plasmas, 2017, 24, .	1.9	3
43	Spectral and spatial characterisation of laser-driven positron beams. Plasma Physics and Controlled Fusion, 2017, 59, 014015.	2.1	15
44	Experimental Observation of a Current-Driven Instability in a Neutral Electron-Positron Beam. Physical Review Letters, 2017, 119, 185002.	7.8	44
45	The effect of a negatively chirped laser pulse on the evolution of bubble structure in nonlinear bubble regime. Physics of Plasmas, 2016, 23, 123113.	1.9	3
46	Particle-in-cell simulation study of a lower-hybrid shock. Physics of Plasmas, 2016, 23, .	1.9	8
47	Magnetic field generation during intense laser channelling in underdense plasma. Physics of Plasmas, 2016, 23, 063121.	1.9	7
48	A high-energy, high-flux source of gamma-rays from all-optical non-linear Thomson scattering. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 291-300.	1.6	9
49	Scaling of ion spectral peaks in the hybrid RPA-TNSA region. Journal of the Korean Physical Society, 2016, 68, 768-771.	0.7	0
50	Enhancement of wear and corrosion resistance of beta titanium alloy by laser gas alloying with nitrogen. Applied Surface Science, 2016, 367, 80-90.	6.1	80
51	Comprehensive numerical modelling of the performance of a second harmonic generation stage coupled with a low-gain optical parametric amplifier. Optics Express, 2016, 24, 5212.	3.4	1
52	Optical measurement of the temporal delay between two ultra-short and focussed laser pluses. Optics Express, 2016, 24, 3127.	3.4	12
53	Generation of high contrast and high spatial quality idler from a low-gain optical parametric amplifier. Applied Optics, 2016, 55, 9341.	2.1	5
54	Overview of laser-driven generation of electronâ€“positron beams. Journal of Plasma Physics, 2015, 81, .	2.1	26

#	Article	IF	Citations
55	Thin-shell instability in collisionless plasma. Physical Review E, 2015, 92, 031101.	2.1	9
56	Calibration of BAS-TR image plate response to high energy (3-300 MeV) carbon ions. Review of Scientific Instruments, 2015, 86, 123302.	1.3	27
57	Laser-driven Thomson scattering for the generation of ultra-bright multi-MeV gamma-ray beams. Proceedings of SPIE, 2015, , .	0.8	1
58	Generation of neutral and high-density electronâ€“positron pair plasmas in the laboratory. Nature Communications, 2015, 6, 6747.	12.8	252
59	Laser-driven generation of high-quality ultra-relativistic positron beams. Journal of Plasma Physics, 2015, 81, .	2.1	3
60	Fast-electron refluxing effects on anisotropic hard-x-ray emission from intense laser-plasma interactions. Physical Review E, 2015, 91, 033107.	2.1	13
61	Shocks in unmagnetized plasma with a shear flow: Stability and magnetic field generation. Physics of Plasmas, 2015, 22, 072104.	1.9	1
62	Particle-in-cell simulation study of the interaction between a relativistically moving leptonic micro-cloud and ambient electrons. Astronomy and Astrophysics, 2015, 577, A137.	5.1	3
63	10.1063/1.4926525.3. , 2015, , .		0
64	Evolution of slow electrostatic shock into a plasma shock mediated by electrostatic turbulence. New Journal of Physics, 2014, 16, 073001.	2.9	15
65	Demonstration of laser pulse amplification by stimulated Brillouin scattering. High Power Laser Science and Engineering, 2014, 2, .	4.6	21
66	Ultrahigh Brilliance Multi-MeV<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-Ray Beams from Nonlinear Relativistic Thomson Scattering. Physical Review Letters, 2014, 113, 224801.	7.8	239
67	Design of a compact spectrometer for high-flux MeV gamma-ray beams. Review of Scientific Instruments, 2014, 85, 065119.	1.3	27
68	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
69	Measurements of high-energy radiation generation from laser-wakefield accelerated electron beams. Physics of Plasmas, 2014, 21, .	1.9	31
70	Parametric study of non-relativistic electrostatic shocks and the structure of their transition layer. Physics of Plasmas, 2013, 20, .	1.9	19
71	Table-Top Laser-Based Source of Femtosecond, Collimated, Ultrarelativistic Positron Beams. Physical Review Letters, 2013, 110, 255002.	7.8	149
72	A table-top laser-based source of short, collimated, ultra-relativistic positron beams. Proceedings of SPIE, 2013, , .	0.8	2

#	Article	IF	Citations
73	Modification of the formation of high-Mach number electrostatic shock-like structures by the ion acoustic instability. Physics of Plasmas, 2013, 20, .	1.9	13
74	Time-Resolved Characterization of the Formation of a Collisionless Shock. Physical Review Letters, 2013, 110, 205001.	7.8	54
75	Laser-driven generation of collimated ultra-relativistic positron beams. Plasma Physics and Controlled Fusion, 2013, 55, 124017.	2.1	33
76	Experimental investigation of hole boring and light sail regimes of RPA by varying laser and target parameters. Plasma Physics and Controlled Fusion, 2013, 55, 124030.	2.1	9
77	Employing laser-accelerated proton beams to diagnose high intensity laser-plasma interactions. , 2012, , .		0
78	Temporal evolution of high mach number electrostatic shocks in laboratory plasma. , 2012, , .		0
79	Magnetic field suppression in collision-less shocks generated during the expansion of a dense plasma into a rarefied medium. EAS Publications Series, 2012, 58, 33-36.	0.3	0
80	Dynamics of Self-Generated, Large Amplitude Magnetic Fields Following High-Intensity Laser Matter Interaction. Physical Review Letters, 2012, 109, 205002.	7.8	70
81	Magnetic instability in a dilute circular rarefaction wave. Physics of Plasmas, 2012, 19, 122102.	1.9	8
82	Simulation of relativistically colliding laser-generated electron flows. Physics of Plasmas, 2012, 19, .	1.9	12
83	Weibel-Induced Filamentation during an Ultrafast Laser-Driven Plasma Expansion. Physical Review Letters, 2012, 108, 135001.	7.8	51
84	Dynamics of intense laser propagation in underdense plasma: Polarization dependence. Physics of Plasmas, 2012, 19, .	1.9	9
85	Ion Acceleration in Multispecies Targets Driven by Intense Laser Radiation Pressure. Physical Review Letters, 2012, 109, 185006.	7.8	243
86	Electrostatic shock dynamics in superthermal plasmas. Physics of Plasmas, 2012, 19, .	1.9	79
87	Particle simulation study of electron heating by counter-streaming ion beams ahead of supernova remnant shocks. Plasma Physics and Controlled Fusion, 2012, 54, 085015.	2.1	11
88	PIC simulation of a thermal anisotropy-driven Weibel instability in a circular rarefaction wave. New Journal of Physics, 2012, 14, 023007.	2.9	6
89	MeV negative ion generation from ultra-intense laser interaction with a water spray. Applied Physics Letters, 2011, 99, .	3.3	23
90	Two-dimensional particle-in-cell simulation of the expansion of a plasma into a rarefied medium. New Journal of Physics, 2011, 13, 073023.	2.9	25

#	Article	IF	Citations
91	Observation of plasma density dependence of electromagnetic soliton excitation by an intense laser pulse. Physics of Plasmas, 2011, 18, 080704.	1.9	18
92	Spatially Resolved Measurements of Laser Filamentation in Long Scale Length Underdense Plasmas with and without Beam Smoothing. Physical Review Letters, 2011, 106, 095001.	7.8	13
93	Generation of a Purely Electrostatic Collisionless Shock during the Expansion of a Dense Plasma through a Rarefied Medium. Physical Review Letters, 2011, 107, 025003.	7.8	35
94	Ion source development and radiobiology applications within the LIBRA project. , 2011, , .		4
95	On the investigation of fast electron beam filamentation in laser-irradiated solid targets using multi-MeV proton emission. Plasma Physics and Controlled Fusion, 2011, 53, 124012.	2.1	12
96	Observation of Quasi Mono-Energetic Protons in Laser Spray-Target Interaction. , 2010, , .		0
97	Laser-IORT: a laser-driven source of relativistic electrons suitable for Intra-Operative Radiation Therapy of tumors. , 2010, , .		1
98	The TARANIS laser: A multi-Terawatt system for laser-plasma investigations. Laser and Particle Beams, 2010, 28, 451-461.	1.0	31
99	Progress in proton radiography for diagnosis of ICF-relevant plasmas. Laser and Particle Beams, 2010, 28, 277-284.	1.0	25
100	Simulation of a collisionless planar electrostatic shock in a protonâ€“electron plasma with a strong initial thermal pressure change. Plasma Physics and Controlled Fusion, 2010, 52, 025001.	2.1	20
101	Results of a laser-driven electron acceleration experiment and perspectives of application for nuclear studies. Radiation Effects and Defects in Solids, 2010, 165, 774-779.	1.2	0
102	Observation and characterization of laser-driven phase space electron holes. Physics of Plasmas, 2010, 17, 010701.	1.9	43
103	Shock creation and particle acceleration driven by plasma expansion into a rarefied medium. Physics of Plasmas, 2010, 17, 082305.	1.9	35
104	Enhanced laser-driven proton-acceleration from limited mass targets by high temporal contrast ultra-intense lasers. , 2010, , .		1
105	The application of laser-driven proton beams to the radiography of intense laserâ€“hohlraum interactions. New Journal of Physics, 2010, 12, 045006.	2.9	38
106	Effect of self-generated magnetic fields on fast-electron beam divergence in solid targets. New Journal of Physics, 2010, 12, 063018.	2.9	29
107	Creation of persistent, straight, 2 mm long laser driven channels in underdense plasmas. Physics of Plasmas, 2010, 17, .	1.9	22
108	Hot Electrons Transverse Refluxing in Ultraintense Laser-Solid Interactions. Physical Review Letters, 2010, 105, 015005.	7.8	97

#	Article	IF	Citations
109	Observation of Postsoliton Expansion Following Laser Propagation through an Underdense Plasma. Physical Review Letters, 2010, 105, 175007.	7.8	45
110	10.1063/1.3469762.1. , 2010, , .		0
111	Complementary ion and extreme ultra-violet spectrometer for laser-plasma diagnosis. Review of Scientific Instruments, 2009, 80, 103302.	1.3	10
112	Relativistic Current Dynamics Investigations By Proton Probing. , 2009, , .		0
113	Observation of the transient charging of a laser-irradiated solid. European Physical Journal D, 2009, 55, 293-297.	1.3	8
114	Application of proton radiography in experiments of relevance to inertial confinement fusion. European Physical Journal D, 2009, 55, 299-303.	1.3	10
115	Field dynamics and filament growth following high-intensity laser-solid interactions. , 2009, , .		0
116	Modified proton radiography arrangement for the detection of ultrafast field fronts. Review of Scientific Instruments, 2009, 80, 113506.	1.3	5
117	Laser-Driven Ultrafast Field Propagation on Solid Surfaces. Physical Review Letters, 2009, 102, 194801.	7.8	87
118	Advanced Diagnostics Applied to a Laser-Driven Electron-Acceleration Experiment. IEEE Transactions on Plasma Science, 2008, 36, 1699-1706.	1.3	1
119	Intense<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-Ray Source in the Giant-Dipole-Resonance Range Driven by 10-TW Laser Pulses. Physical Review Letters, 2008, 101, 105002.	7.8	94