

Evgeny Nerush

List of Publications by Year in descending order

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Version: 2024-02-01

40
papers

1,337
citations

471061

17
h-index

344852

36
g-index

42
all docs

42
docs citations

42
times ranked

674
citing authors

#	ARTICLE	IF	CITATIONS
1	QED cascades induced by circularly polarized laser fields. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2011, 14, .	1.8	261
2	Laser Field Absorption in Self-Generated Electron-Positron Pair Plasma. <i>Physical Review Letters</i> , 2011, 106, 035001.	2.9	253
3	Electron Self-Injection in Multidimensional Relativistic-Plasma Wake Fields. <i>Physical Review Letters</i> , 2009, 103, 175003.	2.9	97
4	Energy partition, $\hat{\gamma}$ -ray emission, and radiation reaction in the near-quantum electrodynamic regime of laser-plasma interaction. <i>Physics of Plasmas</i> , 2014, 21, 023109.	0.7	76
5	Effect of laser polarization on quantum electrodynamic cascading. <i>Physics of Plasmas</i> , 2014, 21, 013105.	0.7	66
6	Optimized multibeam configuration for observation of QED cascades. <i>Physical Review A</i> , 2015, 92, .	1.0	65
7	Carrier-Envelope Phase Effects in Plasma-Based Electron Acceleration with Few-Cycle Laser Pulses. <i>Physical Review Letters</i> , 2009, 103, 035001.	2.9	57
8	Gamma-ray generation in ultrahigh-intensity laser-foil interactions. <i>Physics of Plasmas</i> , 2014, 21, 013109.	0.7	42
9	Probing non-perturbative QED with electron-laser collisions. <i>Scientific Reports</i> , 2019, 9, 9407.	1.6	39
10	Laser-driven hole boring and gamma-ray emission in high-density plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 035007.	0.9	36
11	Production and dynamics of positrons in ultrahigh intensity laser-foil interactions. <i>Physics of Plasmas</i> , 2016, 23, .	0.7	34
12	Analytical model for electromagnetic cascades in rotating electric field. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	30
13	A multidimensional theory for electron trapping by a plasma wake generated in the bubble regime. <i>New Journal of Physics</i> , 2010, 12, 045009.	1.2	27
14	Radiation emission by extreme relativistic electrons and pair production by hard photons in a strong plasma wakefield. <i>Physical Review E</i> , 2007, 75, 057401.	0.8	23
15	Fast electron generation using PW-class PEARL facility. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 653, 35-41.	0.7	20
16	Laser-driven vacuum breakdown waves. <i>Scientific Reports</i> , 2019, 9, 11133.	1.6	19
17	Two-screen single-shot electron spectrometer for laser wakefield accelerated electron beams. <i>Review of Scientific Instruments</i> , 2011, 82, 043304.	0.6	15
18	Radiative damping in plasma-based accelerators. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2012, 15, .	1.8	15

#	ARTICLE	IF	CITATIONS
19	Near QED regime of laser interaction with overdense plasmas. <i>European Physical Journal: Special Topics</i> , 2014, 223, 1069-1082.	1.2	14
20	Efficient gamma-ray source from solid-state microstructures irradiated by relativistic laser pulses. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 074007.	0.9	13
21	Incoherent synchrotron emission of laser-driven plasma edge. <i>Physics of Plasmas</i> , 2015, 22, .	0.7	12
22	Weibel Instability in Hot Plasma Flows with the Production of Gamma-Rays and Electron-Positron Pairs. <i>Astrophysical Journal</i> , 2017, 851, 129.	1.6	12
23	Near-surface electron acceleration during intense laser-solid interaction in the grazing incidence regime. <i>Physics of Plasmas</i> , 2017, 24, 123115.	0.7	12
24	Kinetic modelling of quantum effects in laser-beam interaction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 653, 7-10.	0.7	11
25	Asymptotic electron motion in the strongly-radiation-dominated regime. <i>Physical Review A</i> , 2018, 98, .	1.0	11
26	Hydrodynamical model of QED cascade expansion in an extremely strong laser pulse. <i>Matter and Radiation at Extremes</i> , 2021, 6, 034401.	1.5	9
27	Radiative losses in plasma accelerators. <i>Journal of Experimental and Theoretical Physics</i> , 2006, 103, 800-807.	0.2	8
28	Efficient gamma-ray generation by ultra-intense laser pulses obliquely incident on a planar plasma layer. <i>Quantum Electronics</i> , 2016, 46, 299-304.	0.3	7
29	Quasiclassical approach to synergic synchrotron-Cherenkov radiation in polarized vacuum. <i>New Journal of Physics</i> , 2020, 22, 093072.	1.2	6
30	Global constant field approximation for radiation reaction in collision of high-intensity laser pulse with electron beam. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 074003.	0.9	5
31	Using machine-learning methods for analysing the results of numerical simulation of laser-plasma acceleration of electrons. <i>Quantum Electronics</i> , 2021, 51, 854-860.	0.3	5
32	Radiation reaction-dominated regime of wakefield acceleration. <i>New Journal of Physics</i> , 0, .	1.2	5
33	Beamstrahlung-enhanced disruption in beam-beam interaction. <i>New Journal of Physics</i> , 2021, 23, 103040.	1.2	4
34	Formation and dynamics of a plasma in superstrong laser fields including radiative and quantum electrodynamics effects. <i>JETP Letters</i> , 2016, 104, 883-891.	0.4	3
35	Effect of a prepulse on the efficiency of gamma-ray generation by a relativistic laser pulse obliquely incident on a planar target. <i>Quantum Electronics</i> , 2017, 47, 206-211.	0.3	2
36	Effect of electron-positron plasma production on the generation of a magnetic field in laser-plasma interactions. <i>Quantum Electronics</i> , 2021, 51, 861-865.	0.3	2

#	ARTICLE	IF	CITATIONS
37	Hamiltonian model for plasma electron trapping and acceleration in multidimensional plasma wake field. , 2010, , .		0
38	QED effects and radiation generation in relativistic laser plasma. Proceedings of SPIE, 2011, , .	0.8	0
39	Analytical model for QED cascade development in rotating superstrong electric field. , 2011, , .		0
40	Reconstruction of electron spectrum after magnetic spectrometer with weak magnet. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1025, 166097.	0.7	0