

Hasan Mehdian

List of Publications by Year in descending order

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114
papers

928
citations

471509

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642732

23
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115
all docs

115
docs citations

115
times ranked

262
citing authors

#	ARTICLE	IF	CITATIONS
1	High-frequency waves in a plasma waveguide. <i>Physics of Plasmas</i> , 1994, 1, 3181-3188.	1.9	43
2	Gain equation for a free-electron laser with a helical wiggler and ion-channel guiding. <i>Physical Review E</i> , 2001, 65, 016501.	2.1	40
3	The effect of magnetic field on bistability in 1D photonic crystal doped by magnetized plasma and coupled nonlinear defects. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	37
4	Analysis of plasma-magnetic photonic crystal with a tunable band gap. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	31
5	Dispersion relation and growth in a free-electron laser with planar wiggler and in-channel guiding. <i>Physics of Plasmas</i> , 2002, 9, 1010-1014.	1.9	30
6	Optical and magneto-optical properties of plasma-magnetic metamaterials. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 305101.	2.8	27
7	Gain in a free-electron laser with planar wiggler and ion-channel guiding. <i>Physics of Plasmas</i> , 2002, 9, 670-677.	1.9	25
8	Dispersion relation and growth rate for a high gain ion-channel FEL with a helical wiggler pump. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, 69-84.	2.1	23
9	Effects of ion-channel guiding on the saturation mechanism of a single-pass free-electron laser. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 591, 338-342.	1.6	23
10	Two-stream instability in free electron lasers with a planar wiggler and an axial guide magnetic field. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	22
11	Dispersion relation and growth in a two-stream free electron laser with helical wiggler and ion channel guiding. <i>Physics of Plasmas</i> , 2008, 15, 013111.	1.9	22
12	Electron trajectories in a free-electron laser with planar wiggler and ion-channel guiding. <i>Physics of Plasmas</i> , 2001, 8, 3776-3780.	1.9	21
13	Plasma-activated medium induces apoptosis in chemotherapy-resistant ovarian cancer cells: High selectivity and synergy with carboplatin. <i>Plasma Processes and Polymers</i> , 2021, 18, 2100074.	3.0	21
14	Self-fields in a free-electron laser with helical wiggler and ion-channel guiding. <i>Physics of Plasmas</i> , 2003, 10, 905-907.	1.9	19
15	Steady-state electron trajectories and growth rate in electromagnetically pumped free-electron laser with specific nonuniform magnetic field. <i>Physics of Plasmas</i> , 2008, 15, 073102.	1.9	19
16	Space-charge waves in a coaxial plasma waveguide. <i>Physics of Plasmas</i> , 1998, 5, 273-278.	1.9	18
17	Self-fields in a free-electron laser with electromagnetic-wave wiggler and ion-channel guiding. <i>Physics of Plasmas</i> , 2008, 15, 123101.	1.9	18
18	Free-electron laser harmonic generation in an electromagnetic-wave wiggler and ion channel guiding. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	18

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19	Dispersion relation of azimuthal electromagnetic surface waves on a magnetized plasma column in a dielectric lined slow-wave waveguide. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, 507-518.	2.1	16
20	Kinetic description of a wiggler pumped ion-channel free electron laser. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, 991-1003.	2.1	14
21	Kinetic (particle-in-cell) simulation of nonlinear laser absorption in a finite-size plasma with a background inhomogeneous magnetic field. <i>Physics of Plasmas</i> , 2015, 22, 063102.	1.9	14
22	Magneto-optical properties of one-dimensional conjugated photonic crystal heterojunctions containing plasma layers. <i>Applied Optics</i> , 2015, 54, 7949.	2.1	14
23	Dispersion relation and growth rate in electromagnetically pumped free-electron lasers with ion-channel guiding. <i>Physics of Plasmas</i> , 2008, 15, 073103.	1.9	13
24	Generation of stimulated emission from a relativistic beam by magnetized dusty plasma crystals (DPCs). <i>Plasma Physics and Controlled Fusion</i> , 2010, 52, 055005.	2.1	13
25	Free electron laser with longitudinal wiggler and finite magnetic field in a partially filled waveguide. <i>Physics of Plasmas</i> , 1996, 3, 1130-1136.	1.9	12
26	Electron trajectory and growth rate in a two-stream electromagnetically pumped free electron laser and axial guide field. <i>Physics of Plasmas</i> , 2008, 15, 093103.	1.9	12
27	Inertial confinement fusion based on the ion-bubble trigger. <i>Physics of Plasmas</i> , 2014, 21, 104503.	1.9	12
28	Linear theory of magnetized ion-channel free-electron laser. <i>Physics of Plasmas</i> , 2012, 19, 023108.	1.9	11
29	Investigation of the electron trajectories and gain regimes of the whistler pumped free-electron laser. <i>Physics of Plasmas</i> , 2013, 20, 043106.	1.9	10
30	Twisted beam shaping by plasma photonic crystal. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	10
31	Effects of wiggler and axial guide fields on wave propagation in a free-electron laser. <i>Physics of Plasmas</i> , 1998, 5, 4079-4083.	1.9	9
32	Filamentation instability of quantum magnetized plasma in the presence of an external periodic magnetic field. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	9
33	Effects of magnetic wiggler field and chirped laser pulse on the wakefield amplitude and electron energy gain in a wiggler-assisted laser wakefield accelerator. <i>European Physical Journal Plus</i> , 2018, 133, 1.	2.6	9
34	Electron trajectories in a free-electron laser with helical wiggler, ion-channel guiding, and parallelreversed axial magnetic field. <i>Journal of Plasma Physics</i> , 2004, 70, 9-24.	2.1	8
35	The effects of self-fields on the electron trajectory and gain in a two-stream electromagnetically pumped free-electron laser with axial guiding field. <i>Chinese Physics B</i> , 2010, 19, 014214-5.	1.4	8
36	Controlling chaotic behavior of the equilibrium electrons by simultaneous using of two guiding fields in a free-electron laser with an electromagnetic-wave wiggler. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	8

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37	A spatiotemporal study of the relativistic nonlinear effects on laser absorption by a finite-size magneto plasma. <i>European Physical Journal D</i> , 2014, 68, 1.	1.3	8
38	Nonlinear absorption of short intense laser pulse in multispecies plasma. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	8
39	Collisional absorption of the optical vortex beam in plasma. <i>Optics and Laser Technology</i> , 2019, 117, 165-168.	4.6	8
40	Free electron laser with longitudinal electric wiggler. <i>Journal Physics D: Applied Physics</i> , 1990, 23, 1290-1297.	2.8	7
41	Magnetic field effects in a free electron laser with longitudinal electric wiggler. <i>Journal Physics D: Applied Physics</i> , 1994, 27, 211-218.	2.8	7
42	Space-charge waves in the wiggler field of a Raman free-electron laser. <i>Physical Review E</i> , 1998, 57, 7169-7175.	2.1	7
43	Free-electron laser with a plasma wave wiggler propagating through a magnetized plasma channel. <i>Laser Physics</i> , 2013, 23, 085005.	1.2	7
44	The instability of two non-parallel plasma shells in quantum plasma. <i>Astrophysics and Space Science</i> , 2013, 346, 421-430.	1.4	7
45	Analysis of nested design of plasma antenna based on the azimuthally symmetric surface waves: UHF and SHF bands. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	7
46	Laser-driven electron acceleration in hydrogen pair-ion plasma containing electron impurities. <i>Laser and Particle Beams</i> , 2018, 36, 203-209.	1.0	7
47	Wave generation in a waveguide partially filled with a relativistic electron beam. <i>Journal Physics D: Applied Physics</i> , 1990, 23, 125-128.	2.8	6
48	Excitation of a transverse magnetic waveguide mode near cutoff in a free-electron laser. <i>Physics of Plasmas</i> , 1995, 2, 1311-1315.	1.9	6
49	Free-electron lasers with magnetized ion-wiggler. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 604, 471-475.	1.6	6
50	Gain calculation of a free-electron laser operating with a non-uniform ion-channel guide. <i>Chinese Physics B</i> , 2011, 20, 094103.	1.4	6
51	Quantum instability of two non-parallel flows: Parallel wave propagation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013, 377, 2083-2088.	2.1	6
52	Linear theory of quantum two-stream instability in a magnetized plasma with a transverse wiggler magnetic field. <i>Laser and Particle Beams</i> , 2014, 32, 353-358.	1.0	6
53	Chaotic Electron Trajectories in a Planar Wiggler Free-Electron Laser. <i>Acta Physica Polonica A</i> , 2006, 110, 459-470.	0.5	6
54	Free-electron laser with longitudinal wiggler in a waveguide partially filled with a relativistic electron beam. <i>Journal of Applied Physics</i> , 1991, 70, 517-519.	2.5	5

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55	Electrostatic beam modes in a free-electron laser with a coaxial wiggler. <i>Physical Review E</i> , 1998, 57, 2262-2266.	2.1	5
56	Effect of the Electron-Beam Self-Fields on Gain in an Optical Wiggler Pumped Free-Electron Laser. <i>Contributions To Plasma Physics</i> , 2010, 50, 156-164.	1.1	5
57	Quantum statistical properties of free-electron laser with ion-channel guiding. <i>Journal of Plasma Physics</i> , 2012, 78, 537-544.	2.1	5
58	The effect of plasma background on the instability of two non-parallel quantum plasma shells in whole K space. <i>Physics of Plasmas</i> , 2014, 21, 072106.	1.9	5
59	INDUCED MAXIMUM MAGNETIC FIELD IN COSMIC OUTFLOW SYSTEM BY A RELATIVISTIC CURRENT FILAMENTATION INSTABILITY: EXACT ANALYTICAL MODEL. <i>Astrophysical Journal</i> , 2015, 801, 89.	4.5	5
60	Transition between laser absorption dominated regimes in carbon-based plasma. <i>AIP Advances</i> , 2017, 7, 095106.	1.3	5
61	Improving Cold Atmospheric Pressure Plasma Efficacy on Breast Cancer Cells Control-Ability and Mortality Using Vitamin C and Static Magnetic Field. <i>Plasma Chemistry and Plasma Processing</i> , 2020, 40, 511-526.	2.4	5
62	Ionâ€œelectrostatic instabilities in currentâ€œcarrying magnetized plasmas. <i>Journal of Applied Physics</i> , 1981, 52, 6078-6083.	2.5	4
63	Stimulated Raman scattering of anEHwaveguide mode near cyclotron resonance. <i>Physical Review E</i> , 1994, 49, 4739-4742.	2.1	4
64	A comparison between electron orbits for both an axial magnetic field and an ion-channel guiding in a FEL with an electromagnetic wave wiggler. <i>Journal of Plasma Physics</i> , 2008, 74, 187-196.	2.1	4
65	Effects of self-fields on electron trajectory and gain in two-stream electromagnetically pumped free-electron laser with ion channel guiding. <i>Chinese Physics B</i> , 2011, 20, 074101.	1.4	4
66	High-Power Microwave Generation by a Periodic Focusing Quadrupole Transport System. <i>IEEE Transactions on Plasma Science</i> , 2011, 39, 761-768.	1.3	4
67	Investigation of betatron instability in a wiggler pumped ion-channel free electron laser. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 105010.	2.1	4
68	Spatiotemporal evolution of a thin plasma foil with Kappa distribution. <i>Laser and Particle Beams</i> , 2014, 32, 523-529.	1.0	4
69	Enhancement of terahertz radiation power from a prebunched electron beam using helical wiggler and ion-channel guiding. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	4
70	A relativistic PIC model of nonlinear laser absorption in a finite-size plasma with arbitrary mass and density ratios. <i>Laser and Particle Beams</i> , 2015, 33, 647-654.	1.0	4
71	Numerical study of electron acceleration by plasma wave in an ion channel under obliquely applied magnetic field. <i>Optik</i> , 2015, 126, 3299-3302.	2.9	4
72	Magnetorotational instability of weakly ionized and magnetized electron-positron-ion plasma. <i>Physics of Plasmas</i> , 2016, 23, 102903.	1.9	4

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73	Twisted modes instability of electron-positron shell interacted with moving ion background. <i>Laser and Particle Beams</i> , 2017, 35, 543-550.	1.0	4
74	Nonlinear simulation of free electron laser in a rectangular waveguide and ion-channel guiding. <i>Physics of Plasmas</i> , 2018, 25, 123108.	1.9	4
75	Morphological risk assessment of cold atmospheric plasma-based therapy: bone marrow mesenchymal stem cells in treatment zone proximity. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 495203.	2.8	4
76	Relativistic free-electron generator of space-charge waves. <i>Journal Physics D: Applied Physics</i> , 1993, 26, 9-15.	2.8	3
77	Kinetic description of a planar wiggler free electron laser with ion-channel guiding. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, 2051-2061.	2.1	3
78	Kinetic description of self-field effects on laser and betatron emission in wiggler-pumped ion-channel free electron lasers. <i>Physica Scripta</i> , 2011, 83, 035401.	2.5	3
79	Comparison of self-fields effects in two-stream electromagnetically pumped FEL with ion-channel guiding and axial magnetic field. <i>Journal of Plasma Physics</i> , 2011, 77, 765-776.	2.1	3
80	Semi-analytic approach for determination of poloidal beta limits using plasma internal inductance in Damavand tokamak. <i>Physica Scripta</i> , 2015, 90, 105604.	2.5	3
81	Magnetic measurement based methods in determination of plasma equilibrium parameters in Damavand tokamak. <i>Journal of Instrumentation</i> , 2016, 11, P06015-P06015.	1.2	3
82	Tunable Faraday effect in one-dimensional photonic crystals doped by plasma. <i>Optik</i> , 2016, 127, 3895-3898.	2.9	3
83	Enhancement of intensity in a periodically layered metal-dielectric waveguide with magnetized plasma. <i>Physics of Plasmas</i> , 2017, 24, 073103.	1.9	3
84	Numerical Study of Practical Surface Eigenmodes in a New Applicable Nested Design of Plasma Antenna. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2018, 17, 1266-1270.	4.0	3
85	Resistive instabilities in current-carrying magnetized plasmas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1980, 80, 263-265.	2.1	2
86	Dispersion relation for azimuthal electromagnetic surface waves on a magnetized annular plasma in a metal waveguide with coaxial anisotropic dielectric inner coating. <i>Journal of Plasma Physics</i> , 2007, 73, 839-855.	2.1	2
87	Electron trajectory and growth rate in two-stream electromagnetically pumped free-electron lasers with ion-channel guiding. <i>Physica Scripta</i> , 2009, 80, 045401.	2.5	2
88	Gain enhancement in two-stream electromagnetically pumped free electron laser with ion-channel guiding. <i>Canadian Journal of Physics</i> , 2010, 88, 15-28.	1.1	2
89	Kinetic description of a wiggler-pumped ion-channel free-electron laser by applying the Einstein coefficient technique. <i>Journal of Plasma Physics</i> , 2013, 79, 853-857.	2.1	2
90	Filamentation instability of electron/ion beams in magnetized plasma waveguide. <i>Journal of Plasma Physics</i> , 2014, 80, 81-87.	2.1	2

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91	The general dispersion relation of induced streaming instabilities in quantum outflow systems. <i>AIP Advances</i> , 2015, 5, 117236.	1.3	2
92	The polarization evolution of electromagnetic waves as a diagnostic method for a motional plasma. <i>Applied Physics B: Lasers and Optics</i> , 2017, 123, 1.	2.2	2
93	The propagation of ion-acoustic waves carrying orbital angular momentum in the electron-positron-ion plasmas. <i>Indian Journal of Physics</i> , 2018, 92, 1169-1176.	1.8	2
94	Dispersion and growth characteristics in a circular waveguide loaded with alternate metal and dielectric discs. <i>AIP Advances</i> , 2018, 8, 015322.	1.3	2
95	The Effect of Ion-Channel Guiding on the Chaotic Electron Trajectories in a Free Electron Laser. <i>Acta Physica Polonica A</i> , 2005, 107, 895-906.	0.5	2
96	A van der Waals force-based adhesion study of stem cells exposed to cold atmospheric plasma jets. <i>Scientific Reports</i> , 2022, 12, .	3.3	2
97	Effects of collisions on current-driven ion-electrostatic waves. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1981, 86, 145-148.	2.1	1
98	Lower-hybrid instability in current-carrying plasmas. <i>Journal of Plasma Physics</i> , 1982, 28, 527-537.	2.1	1
99	Wiggler-field effects on the space-charge waves of a Raman free-electron laser. <i>Physical Review E</i> , 1999, 60, 2264-2271.	2.1	1
100	The Solution of the Spherical Raman-Nath Equation for Free-Electron Laser in the Presence of Ion-Channel Guiding. <i>Journal of Fusion Energy</i> , 2012, 31, 463-466.	1.2	1
101	Dispersion relation and growth rate for a corrugated channel free-electron laser with a helical wiggler pump. <i>Chinese Physics B</i> , 2013, 22, 075205.	1.4	1
102	Dispersion properties of plasma clad annular optical fiber. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	1
103	Plasma inhomogeneity effects on particles energization by high-power laser pulse in a finite-size plasma. <i>Waves in Random and Complex Media</i> , 0, , 1-11.	2.7	1
104	Self-field effects on small-signal gain in two-stage free-electron lasers. <i>Pramana - Journal of Physics</i> , 2011, 76, 489-500.	1.8	0
105	Filamentation instability of a laser beam in an inhomogeneous plasma in an arbitrarily oriented external magnetic field. <i>Journal of Plasma Physics</i> , 2013, 79, 921-926.	2.1	0
106	Maximum magnetic field in cosmic outflows systems. , 2015, , .		0
107	Kinetic description of a free electron laser with an electromagnetic-wave wiggler and ion-channel guiding by using the Einstein coefficient technique. <i>Laser Physics</i> , 2016, 26, 045003.	1.2	0
108	Current filamentation instability of warm diluted electron beam in collisional weakly ionized plasma system. <i>Physics of Plasmas</i> , 2017, 24, 032120.	1.9	0

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109	The self-electric field effect on the MRI instability of magnetized rotational flows: Cylindrical model. <i>Europhysics Letters</i> , 2017, 119, 39001.	2.0	0
110	Enhancement of output power in a two-section periodical circular waveguide structure using magnetized plasma and a relativistic electron beam. <i>Applied Physics B: Lasers and Optics</i> , 2018, 124, 1.	2.2	0
111	How a relativistic electron beam-ion channel system can act as a polarizer. <i>Applied Optics</i> , 2018, 57, 7030.	1.8	0
112	Coupling Instability of a Warm Relativistic Electron Beam with Ion-Channel Guiding. <i>Communications in Theoretical Physics</i> , 2019, 71, 1236.	2.5	0
113	Local stability analysis of interface region of astrophysical viscous shear flows with a gradual velocity gradient. <i>Advances in Space Research</i> , 2020, 65, 1607-1614.	2.6	0
114	Nonlinear simulation of TM mode free electron laser in rectangular waveguide with ion-channel. <i>Laser Physics</i> , 2021, 31, 035002.	1.2	0