

# Ali Reza Niknam

## List of Publications by Year in descending order

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131  
papers

1,119  
citations

430874

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docs citations

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times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of microwave heating for hyperthermia cancer treatment. <i>Waves in Random and Complex Media</i> , 2024, 34, 211-225.	2.7	1
2	Dispersion of electromagnetic waves in coaxial cylindrical rippled-wall waveguide including plasma layer. <i>Waves in Random and Complex Media</i> , 2022, 32, 66-77.	2.7	0
3	Controlling the characteristics of injected and accelerated electron bunch in corrugated plasma channel by temporally asymmetric laser pulses. <i>Scientific Reports</i> , 2022, 12, 8115.	3.3	1
4	Particle in cell simulations of the pulsed plasma sheath: Dependence on pulse parameters. <i>Journal of Electrostatics</i> , 2022, 117, 103723.	1.9	3
5	Excitation and enhancement of wakefield by beating of two laser beams in a preformed plasma channel: An analytical study. <i>Physics of Plasmas</i> , 2022, 29, 072305.	1.9	1
6	Atomistic simulation of ultra-short pulsed laser ablation of metals with single and double pulses: An investigation of the re-deposition phenomenon. <i>Applied Surface Science</i> , 2021, 537, 147775.	6.1	19
7	Effects of relativistic and ponderomotive nonlinearities on the interaction of high-power laser beam with an inhomogeneous warm plasma. <i>Contributions To Plasma Physics</i> , 2021, 61, e202000086.	1.1	1
8	Laser pulse-electron beam synergy effect on electron self-injection and higher energy gain in laser wakefield accelerators. <i>Scientific Reports</i> , 2021, 11, 37.	3.3	8
9	Quasi-phase-matched laser wakefield acceleration of electrons in an axially density-modulated plasma channel. <i>Scientific Reports</i> , 2021, 11, 15207.	3.3	2
10	An improved technique based on microwave thermoacoustic method for breast cancer screening. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 415401.	2.8	0
11	Controlled electron injection into beam driven plasma wakefield accelerators employing a co-propagating laser pulse. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 125016.	2.1	2
12	Time-resolved evolution of collisional transient sheath in plasma source ion implantation. <i>Physica Scripta</i> , 2021, 96, 125623.	2.5	3
13	Terahertz wave amplification by a laser-modulated relativistic electron beam. <i>Physical Review Accelerators and Beams</i> , 2021, 24, .	1.6	0
14	Analysis of filamentation instability in a current-carrying plasma using meshless method of lines coupled with radial basis functions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020, 384, 126839.	2.1	4
15	Rotating ion beam effects on temperature gradient instability in completely ionized plasmas. <i>Physical Review E</i> , 2020, 102, 043208.	2.1	0
16	Influence of flying mirror features and time delay between two counterpropagating laser pulses on the generated attosecond pulse intensity in near-critical density plasmas. <i>AIP Advances</i> , 2020, 10, 065133.	1.3	0
17	Dispersion characteristics of terahertz transverse electric mode in a smooth-wall cylindrical waveguide with a degenerate plasma layer. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	3.3	1
18	Electron-exchange and correlation effects on filamentation instability of a high-density current-driven plasma. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	4

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19	Amplitude enhancement of plasma wakefield by interaction of relativistic Gaussian electron beam with inhomogeneous magnetized plasma. AIP Advances, 2020, 10, 015330.	1.3	1
20	Terahertz radiation emission from three-color laser-induced air plasma. European Physical Journal Plus, 2020, 135, 1.	2.6	4
21	Quasilinear dynamics of ordinary mode electromagnetic cyclotron instability driven by the interaction of rotating electron beam with magnetized plasma. Plasma Physics and Controlled Fusion, 2020, 62, 115004.	2.1	1
22	Longitudinal wave instability due to rotating beam-plasma interaction in weakly turbulent astrophysical plasmas. Monthly Notices of the Royal Astronomical Society, 2019, 489, 3059-3065.	4.4	2
23	Optimizing the electron acceleration in vacuum by chirped ultrashort laser pulse using particle swarm method. Laser and Particle Beams, 2019, 37, 242-251.	1.0	3
24	Simulation of thermoacoustic resonance response of tumor by finite element method. Journal of Applied Physics, 2019, 126, .	2.5	6
25	Interaction of counterstreaming rotating electron-positron beams with inhomogeneous electron-ion plasma. Physics of Plasmas, 2019, 26, 092107.	1.9	3
26	Attosecond pulse generation by relativistic flying mirrors in laser-plasma interaction: Effect of plasma density and driver amplitude on the generated pulse. Physics of Plasmas, 2019, 26, .	1.9	3
27	The influence of static magnetic field on nonlinear response of a plasma background in the presence of two laser beams with different profiles (Hermite and Laguerre Gaussian). Laser Physics, 2019, 29, 046002.	1.2	4
28	Resonance absorption of intense short laser pulse in near critical inhomogeneous plasma. Waves in Random and Complex Media, 2019, 29, 215-226.	2.7	4
29	Propagation of surface waves in a spin 1/2 magnetized collisional quantum plasma half-space. European Physical Journal Plus, 2018, 133, 1.	2.6	9
30	Terahertz radiation generation through the nonlinear interaction of Hermite and Laguerre Gaussian laser beams with collisional plasma: Field profile optimization. Journal of Applied Physics, 2018, 123, 153101.	2.5	19
31	Atomistic simulation of femtosecond laser pulse interactions with a copper film: Effect of dependency of penetration depth and reflectivity on electron temperature. Journal of Applied Physics, 2018, 123, .	2.5	13
32	Thermal effects on longitudinal waves instabilities in rotating beam-plasma interaction. Physics of Plasmas, 2018, 25, 032118.	1.9	5
33	Dissipative instability of longitudinal wave in interaction between spiral electron beam and warm collisional magnetized plasma. Physics of Plasmas, 2018, 25, 112108.	1.9	1
34	Terahertz Dyakonov plasmon surface waves supported by a plasma interface. Physical Review B, 2018, 98, .	1.9	1
35	Terahertz Dyakonov surface waves in plasma metamaterials. Optics Letters, 2018, 43, 519.	3.3	13
36	Microwave reflection, transmission, and absorption by human brain tissue. , 2018, , .		1

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37	Wakefield evolution and electron acceleration in interaction of frequency-chirped laser pulse with inhomogeneous plasma. <i>Physics of Plasmas</i> , 2017, 24, 023112.	1.9	20
38	Analytical study of effects of positron density and temperature anisotropy on electrostatic ion cyclotron instability. <i>Physics of Plasmas</i> , 2017, 24, 032103.	1.9	2
39	Skull and cerebrospinal fluid effects on microwave radiation propagation in human brain. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 495401.	2.8	7
40	Nonlinear space charge dynamics and modulational instability in the interaction of intense laser pulses with electron-positron plasmas. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	2
41	Effect of gas mixing on physical properties of warm collisional helicon plasmas. <i>Physics of Plasmas</i> , 2017, 24, 103525.	1.9	3
42	Modification of electromagnetic fields and plasma resistance by thermal effects in helicon plasmas. <i>Physics of Plasmas</i> , 2017, 24, 053511.	1.9	4
43	Dynamics of THz angular distribution radiated from air plasma produced by two-color laser pulses. , 2016, , .		0
44	Resonant terahertz radiation from warm collisional inhomogeneous plasma irradiated by two Gaussian laser beams. <i>Physics of Plasmas</i> , 2016, 23, 053110.	1.9	21
45	Numerical analysis of electrostatic ion cyclotron instability in an electron-positron-ion plasma. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	6
46	Electrostatic ion cyclotron instability in a plasma with q-nonextensive distributions. <i>Physics of Plasmas</i> , 2016, 23, 122110.	1.9	6
47	Response to "Comment on "Propagation of surface waves on a semi-bounded quantum magnetized collisional plasma" [Phys. Plasmas 23, 044701 (2016)]. <i>Physics of Plasmas</i> , 2016, 23, 044702.	1.9	0
48	A new version of fermion coupled coherent states method: Theory and applications in simulation of two-electron systems. <i>Chemical Physics Letters</i> , 2016, 653, 60-66.	2.6	4
49	Evolution of a Gaussian laser beam in warm collisional magnetoplasma. <i>Physics of Plasmas</i> , 2016, 23, 073119.	1.9	9
50	Collisional effects on the modulational instability of intense laser pulses in magnetoactive plasmas. <i>Laser and Particle Beams</i> , 2015, 33, 705-711.	1.0	0
51	Dielectric permittivity tensor and low frequency instabilities of a magnetoactive current-driven plasma with nonextensive distribution. <i>Physics of Plasmas</i> , 2015, 22, 122102.	1.9	2
52	Nonlinear interaction between surface plasmons and ion oscillations in a semi-bounded collisional quantum plasma. <i>Physics of Plasmas</i> , 2015, 22, 112115.	1.9	1
53	Optimizing chirped laser pulse parameters for electron acceleration in vacuum. <i>Journal of Applied Physics</i> , 2015, 118, 183106.	2.5	14
54	Ohmic heating and space charge effects in microwave-plasma interaction. <i>Laser and Particle Beams</i> , 2015, 33, 87-95.	1.0	1

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55	Self similar solution of superradiant amplification of ultrashort laser pulses in plasma. <i>Physics of Plasmas</i> , 2015, 22, 053105.	1.9	4
56	Filamentation Instability in a Current-Carrying Plasma in the Presence of Quantum Effects. <i>Contributions To Plasma Physics</i> , 2015, 55, 315-320.	1.1	4
57	Plasma immersion ion implantation characteristics with q-nonextensive electron velocity distribution. <i>Journal of Plasma Physics</i> , 2015, 81, .	2.1	19
58	Effect of nonextensive velocity distribution on the filamentation instability in a current-driven dusty plasma. <i>Astrophysics and Space Science</i> , 2015, 357, 1.	1.4	3
59	Spatiotemporal evolution of high power laser pulses in relativistic magnetized inhomogeneous plasmas. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	10
60	Kinetic theory of the filamentation instability in a collisional current-driven plasma with nonextensive distribution. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	6
61	Complex plasma in $g\tilde{A}$ -B configurations: Stability switching and stationary structure. <i>Physics of Plasmas</i> , 2015, 22, 083709.	1.9	1
62	Dust gravitational drift wave in complex plasma under gravity. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	4
63	Weakly relativistic and ponderomotive effects on self-focusing and self-compression of laser pulses in near critical plasmas. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	17
64	Filamentation instability of nonextensive current-driven plasma in the ion acoustic frequency range. <i>Physics of Plasmas</i> , 2014, 21, 122106.	1.9	5
65	Effect of the q-nonextensive electron velocity distribution on a magnetized plasma sheath. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	39
66	Particle in cell simulation of low frequency instability in a current carrying plasma in the presence of negative ions. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	5
67	Particle in cell simulations of Buneman instability of a current-driven plasma with q-nonextensive electron velocity distribution. <i>Physics of Plasmas</i> , 2014, 21, 092307.	1.9	13
68	Increasing the upper-limit intensity in relativistic and ponderomotive self-focusing by using plasma with a linear electron temperature ramp. <i>Plasma Sources Science and Technology</i> , 2014, 23, 064011.	3.1	11
69	Dust magneto-gravitational drift wave in $g\tilde{A}$ -B configuration. <i>Physics of Plasmas</i> , 2014, 21, 113702.	1.9	3
70	Effect of $q$ -non-extensive distribution of electrons on the plasma sheath floating potential. <i>Journal of Plasma Physics</i> , 2014, 80, 607-618.	2.1	23
71	External magnetic field effect on the sheath dynamics and implantation profiles in the vicinity of a long step shaped target in plasma immersion ion implantation. <i>Vacuum</i> , 2014, 101, 354-359.	3.5	6
72	Temperature Effect on Self-Focusing and Defocusing of Gaussian Laser Beam Propagation Through Plasma in Weakly Relativistic Regime. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 742-747.	1.3	18

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73	Increasing the upper-limit intensity and temperature range for thermal self-focusing of a laser beam by using plasma density ramp-up. <i>Physics of Plasmas</i> , 2014, 21, 032309.	1.9	11
74	Energy Distribution Along the Focal Axis of a Metallic Cylindrical Parabolic Reflector Covered With a Plasma Layer. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 286-292.	1.3	7
75	Modulational instability of electromagnetic waves in a collisional quantum magnetoplasma. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	10
76	Nonlinear Steepening of Density Profile by Intense Laser Radiation in Collisional Inhomogeneous Plasmas. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 1353-1357.	1.3	4
77	Effect of nuclear motion on high-order-harmonic generation of $H^{(2)}$ in intense ultrashort laser pulses. <i>Physical Review A</i> , 2014, 90, .	2.5	13
78	Ponderomotive self-focusing of Gaussian laser beam in warm collisional plasma. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	24
79	Weakly relativistic and ponderomotive effects in interaction of intense laser beam with inhomogeneous collisionless and collisional plasmas. <i>Waves in Random and Complex Media</i> , 2014, 24, 1-18.	2.7	8
80	Electromagnetic modeling of the energy distribution of a metallic cylindrical parabolic reflector covered with a magnetized plasma layer. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	2
81	Characteristics of Positive Ions in the Sheath Region of Magnetized Collisional Electronegative Discharges. <i>Plasma Science and Technology</i> , 2014, 16, 552-556.	1.5	3
82	Weibel instability for a streaming electron, counterstreaming e-e, and e-p plasmas with intrinsic temperature anisotropy. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	15
83	Propagation of surface waves on a semi-bounded quantum magnetized collisional plasma. <i>Physics of Plasmas</i> , 2013, 20, 122106.	1.9	23
84	Self-focusing and stimulated Brillouin back-scattering of a long intense laser pulse in a finite temperature relativistic plasma. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	15
85	Acceleration of positrons by a relativistic electron beam in the presence of quantum effects. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	2
86	Formation of current filaments and magnetic field generation in a quantum current-carrying plasma. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	8
87	Turning point temperature and competition between relativistic and ponderomotive effects in self-focusing of laser beam in plasma. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	26
88	Space Charge and Ponderomotive Force Effects in Interaction of High-Power Microwave With Plasma. <i>IEEE Transactions on Plasma Science</i> , 2013, 41, 3094-3098.	1.3	4
89	Acceleration of dust grains by means of the high energy ion beam. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013, 377, 2368-2372.	2.1	0
90	Nonlinear interaction of intense electromagnetic waves with a magnetoactive electron-positron-ion plasma. <i>Physics of Plasmas</i> , 2013, 20, 082123.	1.9	9

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91	Microwave ponderomotive action on the inhomogeneous collisionless and collisional plasmas. <i>Waves in Random and Complex Media</i> , 2013, 23, 183-199.	2.7	9
92	Numerical simulation of pulsed plasma sheath dynamics around a micro-sized tip. <i>Journal of Plasma Physics</i> , 2013, 79, 759-764.	2.1	2
93	PIC Simulation of Current-Driven Buneman Instability in Presence of Collisional and Thermal Effects. <i>Contributions To Plasma Physics</i> , 2013, 53, 580-587.	1.1	4
94	Ion beam driven instabilities in unmagnetized and strongly magnetized plasmas. <i>Waves in Random and Complex Media</i> , 2012, 22, 356-369.	2.7	2
95	Low-Frequency Instabilities in the Interaction of Ion Beam With Magnetized Plasma. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 429-437.	1.3	4
96	Simulation of filamentation instability of a current-carrying plasma by particle in cell method. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	12
97	Influence of Thermal and Collisional Effects on the Dielectric Permittivity Tensor in a Multi Layer Plasma Waveguide With Elliptical Cross Section. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 414-420.	1.3	7
98	Fundamentals of Slot Antenna Designing for Application in Surface Wave Plasma Sources. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 470-480.	1.3	1
99	Theoretical study of the surface waves in semi-bounded quantum collisional plasmas. <i>Physics of Plasmas</i> , 2012, 19, 032109.	1.9	28
100	Study of Nonlinear Dynamics of the Filamentation Instability in a Current-Carrying Plasma Using Adomian Decomposition Method. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 9-15.	1.3	7
101	Self-focusing of intense high frequency electromagnetic waves in a collisional magnetoactive plasma. <i>Physics of Plasmas</i> , 2011, 18, 112305.	1.9	25
102	Simulation of low frequency Buneman instability of a current-driven plasma by particle in cell method. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	14
103	Filamentation instability of current-driven dust ion-acoustic waves in a collisional dusty plasma. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	9
104	Dust-acoustic filamentation of a current-driven dusty plasma. <i>Physics of Plasmas</i> , 2011, 18, 063703.	1.9	9
105	Numerical Investigation of the Ponderomotive Force Effect in an Underdense Plasma With a Linear Density Profile. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 2390-2393.	1.3	11
106	Evolution of non-resonant Buneman instability with a negative diffusion equation. <i>Physica Scripta</i> , 2010, 82, 065503.	2.5	7
107	Spatial and temporal evolution of filamentation instability in a current-carrying plasma. <i>Physics of Plasmas</i> , 2010, 17, 122303.	1.9	13
108	Rarefaction shock waves and Hugoniot curve in the presence of free and trapped particles. <i>Physics of Plasmas</i> , 2009, 16, 122109.	1.9	14

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109	Dependency of the electronegative sheath structure on the negative ion density and temperature. , 2009, , .		0
110	Effect of positive ion density on the characteristics of the magnetized plasma sheath. , 2009, , .		0
111	Collisional effects in magnetized plasma sheath with two species of positive ions. Journal Physics D: Applied Physics, 2009, 42, 025204.	2.8	33
112	Characterization of copper oxide nanolayers deposited by direct current magnetron sputtering. Thin Solid Films, 2009, 517, 5464-5467.	1.8	12
113	Chemical kinetics simulation of deposition and sp <sup>2</sup> /sp <sup>3</sup> bond ratio of diamond-like carbon film in plasma. Vacuum, 2009, 83, S140-S144.	3.5	1
114	Characteristics of ions in a magnetized plasma sheath with two species of positive ions. Vacuum, 2009, 83, S231-S234.	3.5	6
115	Weakly relativistic and ponderomotive effects on the density steepening in the interaction of an intense laser pulse with an underdense plasma. Physics of Plasmas, 2009, 16, 033105.	1.9	52
116	Investigation of spatiotemporal behavior of the plasma density during the development of the thermocurrent instability. Physics of Plasmas, 2009, 16, 052103.	1.9	5
117	Magnetized plasma sheath with two species of positive ions. Physics of Plasmas, 2008, 15, .	1.9	29
118	Numerical investigation of the magnetized plasma sheath characteristics in the presence of negative ions. Physics of Plasmas, 2008, 15, 123501.	1.9	25
119	Nonlinear filamentation of a current-carrying plasma. Physics of Plasmas, 2008, 15, .	1.9	19
120	Nonlinear dynamics of the filamentation of the resistive instability of a current-carrying plasma. Journal of Plasma Physics, 2008, 74, 319-326.	2.1	8
121	Nonlinear thermocurrent beam instability of a weakly ionized plasma. Physics of Plasmas, 2008, 15, 022107.	1.9	8
122	Low-frequency temperature-dependent plasma discharge instabilities in the presence of external constant electric and magnetic fields. Journal of Plasma Physics, 2008, 74, 35-46.	2.1	5
123	Nonlinear regime of the filamentation of a microwave produced plasma. Physics of Plasmas, 2007, 14, 032113.	1.9	5
124	Density steepening formation in the interaction of microwave field with a plasma. Physics of Plasmas, 2007, 14, 052104.	1.9	21
125	Nonlinear structure of the electromagnetic waves in underdense plasmas. Physics of Plasmas, 2006, 13, 113110.	1.9	24
126	Effects of potential and duration of pulse width on sheath dynamics related to a target with a groove in two-dimensional simulation. Journal of Applied Physics, 2006, 100, 113301.	2.5	17



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127	Kinetic theory of low-frequency instability of discharge plasma. <i>Physics of Plasmas</i> , 2005, 12, 072107.	1.9	3
128	Field profiles of symmetric surface waves in diffusion-controlled regime of a non-isothermal plasma columns. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, 1805-1816.	2.1	4
129	Nonlinear dynamic of low-frequency Buneman instability of a current-driven plasma. <i>Physics of Plasmas</i> , 2005, 12, 062110.	1.9	24
130	Discharge plasma instabilities in the presence of an external constant electric field. <i>Physics of Plasmas</i> , 2003, 10, 4153-4161.	1.9	15
131	Magnetically tuned hybrid resonance emission of terahertz waves from the interaction of intense laser beams with warm collisional inhomogeneous plasma. <i>Waves in Random and Complex Media</i> , 0, , 1-13.	2.7	1