

Ivan Zhelyazkov

List of Publications by Year in descending order

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114
papers

1,338
citations

394421

19
h-index

434195

31
g-index

117
all docs

117
docs citations

117
times ranked

528
citing authors

#	ARTICLE	IF	CITATIONS
1	Axial structure of low-pressure high-frequency discharges sustained by travelling electromagnetic surface waves. <i>Physics Reports</i> , 1995, 255, 79-201.	25.6	89
2	Surface waves in a homogeneous plasma sharply bounded by a dielectric. <i>Plasma Physics</i> , 1978, 20, 1049-1073.	0.9	70
3	STABILITY OF ROTATING MAGNETIZED JETS IN THE SOLAR ATMOSPHERE. I. KELVIN-HELMHOLTZ INSTABILITY. <i>Astrophysical Journal</i> , 2015, 813, 123.	4.5	63
4	Solitary surface waves. <i>Journal of Plasma Physics</i> , 1978, 20, 183-188.	2.1	59
5	Axial structure of a plasma column produced by a large-amplitude electromagnetic surface wave. <i>Journal of Applied Physics</i> , 1986, 59, 1466-1472.	2.5	58
6	Occurrence and transmission potential of asymptomatic and presymptomatic SARS-CoV-2 infections: Update of a living systematic review and meta-analysis. <i>PLoS Medicine</i> , 2022, 19, e1003987.	8.4	44
7	Self-consistent kinetic model of a surface-wave-sustained discharge in nitrogen. <i>Journal Physics D: Applied Physics</i> , 1997, 30, 2663-2676.	2.8	39
8	Self-consistent axial modeling of surface-wave-produced discharges at low and intermediate pressures. <i>Physical Review E</i> , 1999, 60, 875-886.	2.1	39
9	Propagation of a large-amplitude surface wave in a plasma column sustained by the wave. <i>Journal of Applied Physics</i> , 1983, 54, 3049-3052.	2.5	37
10	Kelvin-Helmholtz instability of twisted magnetic flux tubes in the solar wind. <i>Astronomy and Astrophysics</i> , 2014, 561, A62.	5.1	36
11	Modeling of a plasma column produced and sustained by a traveling electromagnetic surface wave. <i>Journal of Applied Physics</i> , 1989, 66, 1641-1650.	2.5	32
12	Modeling of a plasma column produced and sustained by a traveling electromagnetic wave in the presence of a constant axial magnetic field. <i>Physical Review A</i> , 1991, 44, 2625-2640.	2.5	29
13	Populations of excited atomic states along argon surface-wave plasma columns at low and intermediate pressures. <i>Journal of Applied Physics</i> , 2000, 87, 7652-7659.	2.5	24
14	Theoretical study of a plasma column sustained by an electromagnetic surface wave in the dipolar mode. <i>Journal of Plasma Physics</i> , 1991, 45, 137-152.	2.1	23
15	Modeling of an axially inhomogeneous microwave argon plasma column at a moderate pressure. <i>Journal of Applied Physics</i> , 1998, 84, 147-153.	2.5	23
16	Magnetohydrodynamic waves and their stability status in solar spicules. <i>Astronomy and Astrophysics</i> , 2012, 537, A124.	5.1	23
17	Observation of standing kink waves in solar spicules. <i>Astrophysics and Space Science</i> , 2012, 337, 33-37.	1.4	23
18	Kelvin-Helmholtz instability of kink waves in photospheric twisted flux tubes. <i>Astronomy and Astrophysics</i> , 2012, 547, A14.	5.1	20

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19	Surface Plasma Wave Solitons. Beitrage Aus Der Plasmaphysik, 1983, 23, 621-623.	0.1	19
20	Theoretical study of the influence of a metal enclosure on the parameters of a plasma column sustained by a travelling electromagnetic surface wave. Physica Scripta, 1991, 43, 68-73.	2.5	19
21	On Modeling the Kelvin-Helmholtz Instability in Solar Atmosphere. Journal of Astrophysics and Astronomy, 2015, 36, 233-254.	1.0	18
22	Fast surface waves in an ideal Hall-magnetohydrodynamic plasma slab. Physics of Plasmas, 1996, 3, 4346-4354.	1.9	17
23	Kelvin-Helmholtz instability in solar cool surges. Advances in Space Research, 2015, 56, 2727-2737.	2.6	17
24	Kelvin-Helmholtz instability of magnetohydrodynamic waves propagating on solar surges. Astrophysics and Space Science, 2015, 356, 231-240.	1.4	17
25	Ion surface waves on bounded warm plasma. Physica, 1973, 63, 182-190.	0.9	16
26	Theoretical study of a plasma column sustained by a guided electrostatic wave in the presence of a constant axial magnetic field. Journal of Applied Physics, 1987, 62, 2713-2721.	2.5	16
27	Kelvin-Helmholtz instability in an active region jet observed with Hinode. Astrophysics and Space Science, 2016, 361, 1.	1.4	16
28	Nonlinear interaction of electrostatic surface waves in a semi-infinite plasma. Part 1. Derivation of the coupled mode equations. Journal of Plasma Physics, 1981, 26, 217-230.	2.1	15
29	Vibronic approach in the theory of the excitonic spectra of molecular crystals. Physical Review B, 2007, 75, .	3.2	15
30	Dark envelope solitons of fast magnetosonic surface waves in solar flux tubes. Solar Physics, 1988, 115, 17-32.	2.5	14
31	Kelvin-Helmholtz instability in coronal mass ejecta in the lower corona. Astronomy and Astrophysics, 2015, 574, A55.	5.1	14
32	Solitary surface waves on a thin plasma layer. Plasma Physics and Controlled Fusion, 1984, 26, 813-819.	2.1	13
33	Investigation of recurrent EUV jets from highly dynamic magnetic field region. Astrophysics and Space Science, 2017, 362, 1.	1.4	13
34	Kelvin-Helmholtz instability in a twisting solar polar coronal hole jet observed by SDO/AIA. Advances in Space Research, 2018, 61, 628-638.	2.6	13
35	Vibronic spectra of mixed Frenkel and charge transfer excitons. Physical Review B, 2006, 74, .	3.2	11
36	Surface wave propagation in steady ideal Hall-magnetohydrodynamic magnetic slabs. Physics of Plasmas, 2003, 10, 4463-4471.	1.9	10

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37	Nonlinear electrostatic surface waves in a semi-infinite plasma. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1981, 86, 414-416.	2.1	9
38	Comment on "Alfvén resonance" reconsidered: Exact equations for wave propagation across a cold inhomogeneous plasma [Phys. Plasmas 1, 3523 (1994)]. <i>Physics of Plasmas</i> , 1995, 2, 3547-3549.	1.9	9
39	Nonprobe radio-frequency plasma diagnostics method based on the power balance in an asymmetric capacitively coupled discharge. <i>Journal of Applied Physics</i> , 2000, 87, 3263-3269.	2.5	9
40	Low-frequency surface waves on a semi-bounded non-isothermal plasma. <i>European Physical Journal A</i> , 1974, 269, 215-220.	2.5	8
41	High-frequency Surface Waves in a Current Carrying Hot Plasma Column. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1978, 33, 261-268.	1.5	8
42	An experimental study of the axial structure of a gas discharge sustained by a surface electromagnetic wave in the presence of a uniform external magnetic field. <i>Journal Physics D: Applied Physics</i> , 1988, 21, 1371-1376.	2.8	8
43	Effects of nonlocal electron kinetics and transition from \hat{I}_\pm to \hat{I}^3 regime in an RF capacitive discharge in nitrogen. <i>IEEE Transactions on Plasma Science</i> , 1998, 26, 167-174.	1.3	8
44	Propagation of fast surface waves in an ideal Hall-magnetohydrodynamic plasma slab. <i>Physics of Plasmas</i> , 1999, 6, 2340-2348.	1.9	8
45	Excitonic and vibronic structure of absorption spectra of Me-PTCDI and PTCDA crystals. <i>Chemical Physics</i> , 2006, 321, 223-231.	1.9	8
46	MHD waves and instabilities in flowing solar flux-tube plasmas in the framework of Hall magnetohydrodynamics. <i>European Physical Journal D</i> , 2009, 55, 127-137.	1.3	8
47	Kinematics and Energetics of the EUV Waves on 11 April 2013. <i>Solar Physics</i> , 2019, 294, 1.	2.5	8
48	Outbreaks of publications about emerging infectious diseases: the case of SARS-CoV-2 and Zika virus. <i>BMC Medical Research Methodology</i> , 2021, 21, 50.	3.1	8
49	Parametric decay of non-ducted whistler-mode signal. <i>Journal of Plasma Physics</i> , 1979, 22, 377-384.	2.1	7
50	Three-wave interaction in a cold plasma column. <i>Journal of Plasma Physics</i> , 1985, 34, 427-434.	2.1	7
51	Low-pressure plasma columns sustained by traveling electromagnetic surface waves in the dipolar ($m=1$) mode. <i>Journal of Applied Physics</i> , 1992, 71, 1026-1028.	2.5	7
52	MHD surface waves in a complex (longitudinal + sheared) magnetic field. <i>Solar Physics</i> , 1996, 165, 99-114.	2.5	7
53	Macroscopic model for the energy balance of an asymmetric capacitively coupled rf discharge. <i>Journal Physics D: Applied Physics</i> , 1999, 32, 3019-3024.	2.8	7
54	Solar jet on 2014 April 16 modeled by Kelvin-Helmholtz instability. <i>New Astronomy</i> , 2018, 63, 75-87.	1.8	7

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55	Longitudinal resonances of plasma surface waves in noble gases. Electronics Letters, 1967, 3, 253.	1.0	6
56	Interaction of a warm plasma column with high-frequency electric fields: purely growing parametric instability. Journal of Physics A: Mathematical Nuclear and General, 1974, 7, 2223-2235.	1.0	6
57	Kinetic theory of surface wave propagation along a hot plasma column. Journal of Plasma Physics, 1976, 16, 47-55.	2.1	6
58	Study of Parametric Instabilities in a Thin Radially Inhomogeneous Plasma Column. Physica Scripta, 1978, 18, 346-350.	2.5	6
59	Chromospheric and Coronal Heating Due to the Radiation and Collisional Damping of Fast Magnetosonic Surface Waves. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1987, 42, 1443-1450.	1.5	6
60	Modelling of a plasma column sustained by a travelling circularly polarized electromagnetic wave ($m = 1$ mode) in the presence of a constant axial magnetic field. Journal of Plasma Physics, 1992, 48, 37-57.	2.1	6
61	Hall-magnetohydrodynamic waves in flowing ideal incompressible solar-wind plasmas. Plasma Physics and Controlled Fusion, 2010, 52, 065008.	2.1	6
62	Solar Spicules: Recent Challenges in Observations and Theory. , 2011, , .		6
63	Excitonic and vibronic spectra of Frenkel excitons in a two-dimensional simple lattice. Chemical Physics, 2013, 410, 71-80.	1.9	6
64	Kelvin-Helmholtz instability of kink waves in photospheric, chromospheric, and X-ray solar jets. , 2013, , .		6
65	High mode magnetohydrodynamic waves propagation in a twisted rotating jet emerging from a filament eruption. Monthly Notices of the Royal Astronomical Society, 2018, 478, 5505-5513.	4.4	6
66	Low-frequency surface waves on bounded warm magneto-active plasma. Journal of Plasma Physics, 1974, 11, 311-323.	2.1	5
67	Nonlinear interaction of electrostatic surface waves in a semi-infinite plasma. Part 2. Time-dependent solutions to the coupled mode equations. Journal of Plasma Physics, 1981, 26, 231-252.	2.1	5
68	Nonlinear surface waves on a thin plasma layer. Journal of Plasma Physics, 1986, 36, 143-150.	2.1	5
69	Nonlinear surface waves on a plasma layer. Physical Review A, 1988, 38, 6304-6315.	2.5	5
70	High-frequency surface waves on a toroidal isotropic plasma. Plasma Physics and Controlled Fusion, 1993, 35, 1787-1791.	2.1	5
71	Axial structure of a shielded plasma column sustained by a dipolar electromagnetic wave. Journal Physics D: Applied Physics, 1993, 26, 1601-1610.	2.8	5
72	Dispersion of dipolar electromagnetic waves in a radially inhomogeneous axially magnetized plasma column. Journal of Plasma Physics, 1997, 58, 633-646.	2.1	5

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73	Combination bands in vibronic spectra of molecular crystals. <i>Chemical Physics</i> , 2008, 352, 185-196.	1.9	5
74	Stimulated ion surface waves on a semi-infinite plasma. <i>Plasma Physics</i> , 1978, 20, 133-138.	0.9	4
75	Structure of the electric field of low-frequency surface waves in a semi-infinite plasma. <i>Plasma Physics</i> , 1979, 21, 575-581.	0.9	4
76	Chromospheric and coronal heating due to the dissipation of fast magnetoacoustic waves. <i>Solar Physics</i> , 1992, 140, 7-17.	2.5	4
77	Axial structure of a shielded axially magnetized plasma column sustained by a dipolar electromagnetic mode. <i>Plasma Physics and Controlled Fusion</i> , 1994, 36, 1355-1370.	2.1	4
78	Method for computing the attenuation coefficient of electromagnetic waves in anisotropic plasma columns. <i>Physics of Plasmas</i> , 1994, 1, 3734-3741.	1.9	4
79	Conditions for sustaining low-pressure plasma columns by travelling electromagnetic UHF waves. <i>Physica Scripta</i> , 1997, 56, 381-387.	2.5	4
80	Fast Surface Waves Obliquely Propagating in a Hall-Magnetohydrodynamic Low- β^2 Plasma Layer. <i>Contributions To Plasma Physics</i> , 2000, 40, 569-579.	1.1	4
81	Oblique propagation of surface waves in an ideal Hall-magnetohydrodynamic finite β^2 plasma slab. <i>Physics of Plasmas</i> , 2003, 10, 484-494.	1.9	4
82	Hall-magnetohydrodynamic surface waves in solar wind flow-structures. <i>New Journal of Physics</i> , 2004, 6, 14-14.	2.9	4
83	Pre- and post-processing of data for simulation of gyrotrons by the GYROSS software package. <i>Journal of Physics: Conference Series</i> , 2010, 207, 012032.	0.4	4
84	Can High-Mode Magnetohydrodynamic Waves Propagating in a Spinning Macroscopic Be Unstable Due to the Kelvin-Helmholtz Instability?. <i>Solar Physics</i> , 2019, 294, 1.	2.5	4
85	Axial distributions of metastable atoms and charged particles in an ultrahigh frequency argon plasma column at moderate pressures. <i>Journal of Applied Physics</i> , 1996, 79, 3848.	2.5	3
86	Ion flux's pressure dependence in an asymmetric capacitively coupled rf discharge in NF ₃ . <i>Open Physics</i> , 2004, 2, 1-11.	1.7	3
87	Modelling of microwave sustained capillary plasma columns at atmospheric pressure. <i>Journal of Physics: Conference Series</i> , 2006, 44, 110-115.	0.4	3
88	Fast magnetohydrodynamic oscillation of longitudinally inhomogeneous prominence threads: an analogue with quantum harmonic oscillator. <i>Astronomy and Astrophysics</i> , 2014, 565, A35.	5.1	3
89	Modeling Kelvin-Helmholtz Instability in Soft X-Ray Solar Jets. <i>Advances in Astronomy</i> , 2017, 2017, 1-18.	1.1	3
90	Saw-tooth shaped lower hybrid waves. <i>Journal Physics D: Applied Physics</i> , 1978, 11, L103-L105.	2.8	2

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91	Leaky electromagnetic wave resonances of a plasma sphere. <i>Physics of Plasmas</i> , 1996, 3, 3540-3544.	1.9	2
92	Waves and stability of flowing solar wind structures in the framework of the Hall magnetohydrodynamics. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	2
93	Coupling of charge-transfer excitons, Frenkel excitons, and vibrations in a two-dimensional quadratic lattice. <i>Chemical Physics</i> , 2013, 423, 127-134.	1.9	2
94	How Rotating Solar Atmospheric Jets Become Kelvinâ€™Helmholtz Unstable. <i>Frontiers in Astronomy and Space Sciences</i> , 2019, 6, .	2.8	2
95	Modulation of Ionâ€™Cyclotron Turbulence by Lowâ€™Frequency Perturbations in a Magnetized Plasma. <i>Beitrage Aus Der Plasmaphysik</i> , 1978, 18, 119-123.	0.1	1
96	Ion acoustic waves in a thin radially inhomogeneous plasma column. <i>Journal of Physics A</i> , 1978, 11, L63-L67.	1.6	1
97	Comment on â€˜â€™Electromagnetic decay into a surface plasma wave and an ion acoustic surface wave in a semiâ€™infinite plasmaâ€™â€™. <i>Journal of Applied Physics</i> , 1983, 54, 2837-2837.	2.5	1
98	Surface wave propagation in an ideal Hall-magnetohydrodynamic plasma jet in flowing environment. <i>Physics of Plasmas</i> , 2004, 11, 4904-4910.	1.9	1
99	Self-Consistent Modelling of Argon Microwave Discharge Sustained by Electromagnetic Wave in Dipole Mode. <i>European Physical Journal D</i> , 2004, 54, 211-223.	0.4	1
100	Surface wave propagation characteristics in atmospheric pressure plasma column. <i>Journal of Physics: Conference Series</i> , 2007, 63, 012023.	0.4	1
101	Model of a stationary microwave argon discharge at atmospheric pressure. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	1
102	Mixing of Frenkel and Charge-transfer Excitons in One-component Molecular Stacks. , 2010, , .		1
103	Kelvinâ€™Helmholtz Instability in a Cool Solar Jet in the Framework of Hall Magnetohydrodynamics: A Case Study. <i>Solar Physics</i> , 2018, 293, 1.	2.5	1
104	Hall-magnetohydrodynamic waves in flowing ideal incompressible solar-wind plasmas: reconsidered. <i>Astrophysics and Space Science</i> , 2020, 365, 1.	1.4	1
105	Fast Surface Waves Obliquely Propagating in a Hall-Magnetohydrodynamic Low- Plasma Layer. <i>Contributions To Plasma Physics</i> , 2000, 40, 569-579.	1.1	1
106	Resonance Absorption of Electromagnetic Power by Weakly Ionized Gasâ€™. <i>International Journal of Electronics</i> , 1966, 20, 517-524.	1.4	0
107	The Instability of Inhomogeneous Plasma Streams. <i>Radio Science</i> , 1972, 7, 857-870.	1.6	0
108	Comments on Surface Plasma Wave Solitons. <i>Beitrage Aus Der Plasmaphysik</i> , 1987, 27, 85-86.	0.1	0

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109	Parameter study on Kelvinâ€Helmholtz instability in solar wind type flowing structures. Proceedings of the International Astronomical Union, 2006, 2, 309.	0.0	0
110	Vibronic Spectra of Mixed Frenkel and Charge-Transfer Excitons. AIP Conference Proceedings, 2007, , .	0.4	0
111	Kelvinâ€Helmholtz instability in coronal mass ejections and solar surges. AIP Conference Proceedings, 2016, , .	0.4	0
112	Theory of Low-Pressure Plasma Columns Produced by Electromagnetic Waves in the Presence of a Constant Axial Magnetic Field. NATO ASI Series Series B: Physics, 1993, , 95-104.	0.2	0
113	Can Rotating Hot Plasma Jets In The Solar Corona Become Unstable?. , 2018, , .		0
114	Excitation of Low-Frequency Ion Acoustic Perturbations in the Presence of Stationary Lower Hybrid Turbulence. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1978, 33, 121-123.	1.5	0