

Alexander V Vodopyanov

List of Publications by Year in descending order

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126
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126
docs citations

126
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citing authors

#	ARTICLE	IF	CITATIONS
1	Positive column dynamics of a low-current atmospheric pressure discharge in flowing argon. Plasma Sources Science and Technology, 2022, 31, 015009.	3.1	3
2	Production of highly dispersed powders of metal-oxides by evaporation-condensation technique when heated by focused radiation of terahertz-range gyrotron setup. Journal of Physics: Conference Series, 2022, 2256, 012030.	0.4	0
3	Stand for Experimentally Studying Local Parameters of Chemically Active Induction Discharge Plasma. Instruments and Experimental Techniques, 2022, 65, 419-425.	0.5	1
4	CW Multifrequency K-Band Source Based on a Helical-Waveguide Gyro-TWT With Delayed Feedback. IEEE Transactions on Electron Devices, 2021, 68, 330-335.	3.0	7
5	Tungsten Carbide Nanopowder Synthesis under the Influence of Microwave Electromagnetic Radiation on a W-C System Nanocomposite Produced in a Thermal Plasma. Inorganic Materials: Applied Research, 2021, 12, 735-739.	0.5	0
6	Method to Measure the Dielectric Parameters of Powders in Subterahertz and Terahertz Ranges. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 375-380.	3.1	0
7	Measurements of the absolute intensities of spectral lines of Kr, Ar, and O ions in the wavelength range of 10 – 18 nm under pulsed laser excitation. Quantum Electronics, 2021, 51, 700-707.	1.0	3
8	Supersonic Flow of Vacuum Arc Plasma in a Magnetic Field. IEEE Transactions on Plasma Science, 2021, 49, 2478-2489.	1.3	2
9	Microwave assisted synthesis of WC nanopowder from nanosized multicomponent system W-C produced in thermal plasma reactor. International Journal of Refractory Metals and Hard Materials, 2021, 100, 105618.	3.8	3
10	Gas Breakdown in the Focused Beam of NovoFEL THz Radiation. , 2021, , .		0
11	A new plasma-based approach to hydrogen intercalation of graphene. Superlattices and Microstructures, 2021, 160, 107066.	3.1	1
12	Preparation of a Highly Dispersed Powder of Tin Monoxide by the Evaporation/Condensation Method under Heating with Focused Radiation of a Subterahertz Gyrotron. Technical Physics Letters, 2021, 47, 255-258.	0.7	0
13	Powerful terahertz pulsed large-orbit gyrotron for creating an intense ultraviolet plasma source. , 2021, , .		0
14	Experimental Evaluation of the Temperature Dependence of the Absorption of Metal Oxide Powders Heated by a 527-GHz Gyrotron Radiation. Technical Physics Letters, 2021, 47, 827-829.	0.7	0
15	The Radiation Beamline of Novosibirsk Free-Electron Laser Facility Operating in Terahertz, Far-Infrared, and Mid-Infrared Ranges. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 634-646.	3.1	11
16	Dynamics of the gas discharge in noble gases sustained by the powerful radiation of 0.67 THz gyrotron. Physics of Plasmas, 2020, 27, .	1.9	10
17	High-Current Vacuum-Arc Plasma Source for Producing Supersonic Plasma Flows in Magnetic Fields. , 2020, , .		0
18	Non-equilibrium Atmospheric-Pressure Plasma Torch Sustained in a Quasi-optical Beam of Subterahertz Radiation. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 711-727.	2.2	5

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19	Conversion of carbon dioxide in microwave plasma torch sustained by gyrotron radiation at frequency of 24 GHz at atmospheric pressure. <i>Journal of CO2 Utilization</i> , 2020, 40, 101197.	6.8	17
20	Pulsed vacuum arc plasma source of supersonic metal ion flow. <i>Review of Scientific Instruments</i> , 2020, 91, 023302.	1.3	5
21	Optical emission spectroscopy of non-equilibrium microwave plasma torch sustained by focused radiation of gyrotron at 24 GHz. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 305203.	2.8	6
22	Peculiarities of Pulsed Heating by the Radiation of a Subterahertz Gyrotron in the Production of Metal Oxide Nanopowders. <i>Technical Physics Letters</i> , 2020, 46, 760-762.	0.7	1
23	THz gas discharge in nitrogen as a source of ultraviolet radiation. <i>Journal of Physics: Conference Series</i> , 2020, 1697, 012213.	0.4	2
24	Studies of terahertz discharge in noble gases using a Michelson interferometer. <i>Journal of Physics: Conference Series</i> , 2020, 1697, 012220.	0.4	1
25	Study of a gas breakdown in a focused beam of terahertz radiation at the NovoFEL user station. <i>Journal of Physics: Conference Series</i> , 2020, 1697, 012217.	0.4	0
26	THz range gyrotron-based facility for material science and plasma physics research. , 2020, , .		0
27	Prospects of the gas-discharge EUV source based on the plasma creation by powerful pulsed terahertz gyrotrons. , 2020, , .		1
28	Gas discharge sustained by the powerful radiation of 0.26 THz CW gyrotron. , 2020, , .		0
29	Interaction of plasma flow heated by gyrotron radiation with magnetic fields of an arched configuration. , 2020, , .		1
30	Continuous atmospheric pressure discharges in terahertz and sub-terahertz focused beams. , 2020, , .		0
31	THz Gas Discharge Sustained by Powerful Gyrotrons in the Mixtures of Noble Gases with Nitrogen. , 2020, , .		0
32	Prospects for creating an intense ultraviolet source based on the creation of a plasma discharge by a powerful terahertz radiation pulse. , 2020, , .		0
33	Production of metal oxides nanopowders by evaporation-condensation method when heated by radiation of the 0.26/0.53 THz gyrotron setup. , 2020, , .		0
34	Breakdown of the heavy noble gases in a focused beam of powerful sub-THz gyrotron. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	8
35	On the Prospects for the Study of a Point Discharge Sustained by a Terahertz Free Electron Laser Radiation in an Inhomogeneous Gas Flow. , 2019, , .		0
36	Measurement of electron temperature in a non-equilibrium discharge of atmospheric pressure supported by focused microwave radiation from a 24 GHz gyrotron. <i>AIP Advances</i> , 2019, 9, 105009.	1.3	14

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37	Method for determining plasma density in a magnetic field. Journal of Physics: Conference Series, 2019, 1400, 077022.	0.4	2
38	Supersonic plasma flow injection across the magnetic arch in a table-top laboratory setup. Journal of Physics: Conference Series, 2019, 1400, 077034.	0.4	0
39	Applications of the gas discharge sustained by the powerful radiation of THz gyrotrons. Journal of Physics: Conference Series, 2019, 1400, 077032.	0.4	2
40	Dynamics of a Sub-terahertz Discharge in the Heavy Noble Gases Produced by a High-density Radiation Field. , 2019, , .		2
41	Vacuum Arc Plasma Heated by Sub-Terahertz Radiation as a Source of Extreme Ultraviolet Light. IEEE Transactions on Plasma Science, 2019, 47, 828-831.	1.3	1
42	The dynamics of supersonic plasma flow interaction with the magnetic arch. Plasma Physics and Controlled Fusion, 2019, 61, 035001.	2.1	3
43	Parameters of a CW Plasma Torch of Atmospheric Pressure Sustained by Focused Sub-Terahertz Gyrotron Radiation. , 2018, , .		2
44	Observation of extreme ultraviolet light emission from an expanding plasma jet with multiply charged argon or xenon ions. Applied Physics Letters, 2018, 113, .	3.3	25
45	A double-stream Xe:He jet plasma emission in the vicinity of 6.7Ånm. Applied Physics Letters, 2018, 112, .	3.3	13
46	Plasma losses from mirror trap, initiated by microwave radiation under electron cyclotron resonance conditions. Plasma Physics and Controlled Fusion, 2018, 60, 115005.	2.1	1
47	Gas discharge powered by the focused beam of the high-intensive electromagnetic waves of the terahertz frequency band. Journal Physics D: Applied Physics, 2018, 51, 464002.	2.8	17
48	Production of Nanopowders by the Evaporation-Condensation Method Using a Focused Microwave Radiation. Radiophysics and Quantum Electronics, 2017, 59, 698-705.	0.5	9
49	Observation of plasma microwave emission during the injection of supersonic plasma flows into magnetic arch. Plasma Physics and Controlled Fusion, 2017, 59, 075001.	2.1	6
50	Plasma density in discharge sustained in inhomogeneous gas flow by high-power radiation in the terahertz frequency range. Technical Physics Letters, 2017, 43, 186-189.	0.7	11
51	Pulse-Periodic Regimes of Kinetic Instabilities in the Non-Equilibrium Plasma of an Electron Cyclotron Resonance Discharge Maintained by Continuous-Wave Radiation of a 24 GHz Gyrotron. Radiophysics and Quantum Electronics, 2017, 59, 706-710.	0.5	0
52	Microwave Interferometry of Chemically Active Plasma of RF Discharge in Mixtures Based on Fluorides of Silicon and Germanium. Plasma Chemistry and Plasma Processing, 2017, 37, 1655-1661.	2.4	3
53	Application of the 263ÅGHz/1ÅkW gyrotron setup to produce a metal oxide nanopowder by the evaporation-condensation technique. Vacuum, 2017, 145, 340-346.	3.5	26
54	Glow of the Plasma of a Pulse Discharge Produced in Nitrogen by High-Power Terahertz-Wave Radiation. Radiophysics and Quantum Electronics, 2017, 60, 136-142.	0.5	6

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55	A point-like plasma, sustained by powerful radiation of terahertz gyrotrons, as a source of ultraviolet light. , 2017, , .		4
56	Sources of ultraviolet light based on microwave discharges. EPJ Web of Conferences, 2017, 149, 02009.	0.3	2
57	Heating of metal powders in the external high-frequency field. , 2017, , .		0
58	Applications of THz band gyrotrons at IAP RAS: Current state and prospects. , 2017, , .		0
59	Point-like source of extreme ultraviolet radiation based on the plasma of THz gas discharge in a focused beam. , 2017, , .		0
60	Gas breakdown by a focused beam of CW THz radiation. , 2017, , .		1
61	The heating system of metal particles in the microwave field with a frequency of 24 GHz. , 2017, , .		0
62	Light emission properties of a discharge induced in a gas flow by terahertz waves in the vacuum and extreme ultraviolet range. EPJ Web of Conferences, 2017, 149, 02032.	0.3	0
63	Gas breakdown by a focused beam of THz waves. EPJ Web of Conferences, 2017, 149, 02031.	0.3	2
64	High rate production of nanopowders by the evaporation “ condensation method using gyrotron radiation. EPJ Web of Conferences, 2017, 149, 02022.	0.3	4
65	Measurement of plasma density in the discharge maintained in a nonuniform gas flow by a high-power terahertz-wave gyrotron. Physics of Plasmas, 2016, 23, .	1.9	22
66	Excitation of electromagnetic waves in dense plasma during the injection of supersonic plasma flows into magnetic arch. AIP Conference Proceedings, 2016, , .	0.4	4
67	Kinetic instabilities in a mirror-confined plasma sustained by high-power microwave radiation. AIP Conference Proceedings, 2016, , .	0.4	2
68	First experiments with gasdynamic ion source in CW mode. Review of Scientific Instruments, 2016, 87, 02A715.	1.3	8
69	Measurement of plasma density in the discharge maintained in a nonuniform gas flow by a powerful radiation of terahertz-band gyrotron. , 2016, , .		0
70	Gas breakdown by a focused CW 263 GHz beam. , 2016, , .		2
71	New progress of high current gasdynamic ion source (invited). Review of Scientific Instruments, 2016, 87, 02A716.	1.3	38
72	Plasma glow dynamics of pulsed nitrogen discharge induced by the powerful terahertz waves. , 2015, , .		0

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73	Metal Oxide Nanopowder Production by Evaporation-Condensation Using a Focused Microwave Radiation at a Frequency of 24 GHz. Journal of Nanotechnology in Engineering and Medicine, 2015, 6, .	0.8	17
74	Plasma of Vacuum Discharges: The Pursuit of Elevating Metal Ion Charge States, Including a Recent Record of Producing Bi ¹³⁺ . IEEE Transactions on Plasma Science, 2015, 43, 2310-2317.	1.3	16
75	High-rate growth of InN films on sapphire and sapphire substrates by metalorganic vapor phase epitaxy with plasma-assisted nitrogen activation. Technical Physics Letters, 2015, 41, 266-269.	0.7	1
76	Reactive nitrogen source based on ECR discharge sustained by 24 GHz radiation. Japanese Journal of Applied Physics, 2015, 54, 040302.	1.5	1
77	An experimental setup for studying the interaction of dense supersonic plasma flows with an arched magnetic field. Technical Physics Letters, 2015, 41, 901-904.	0.7	8
78	Production of WO ₃ tungsten oxide nanopowders by evaporation-condensation process using focused 24-GHz microwave radiation. High Energy Chemistry, 2015, 49, 267-272.	0.9	9
79	Experimental investigation of powerful THz gyrotrons for initiation of localized gas discharge. , 2015, , .		2
80	Generation of high charge state platinum ions on vacuum arc plasma heated by gyrotron radiation. Review of Scientific Instruments, 2014, 85, 02B902.	1.3	7
81	Deposition of microcrystalline silicon in electron-cyclotron resonance discharge (24GHz) plasma from silicon tetrafluoride precursor. Thin Solid Films, 2014, 562, 114-117.	1.8	10
82	A point-like source of extreme ultraviolet radiation based on a discharge in a non-uniform gas flow, sustained by powerful gyrotron radiation of terahertz frequency band. Applied Physics Letters, 2014, 105, .	3.3	66
83	Generation of Electromagnetic Bursts in the Plasma Cyclotron Maser. Radiophysics and Quantum Electronics, 2013, 56, 12-19.	0.5	11
84	Gyrotron Microwave Heating of Vacuum Arc Plasma for High-Charge-State Metal Ion Beam Generation. IEEE Transactions on Plasma Science, 2013, 41, 2081-2086.	1.3	23
85	Plasma enhanced growth of GaN single crystalline layers from Ga vapour. Crystal Research and Technology, 2013, 48, 186-192.	1.3	5
86	Growing InN films by plasma-assisted metalorganic vapor-phase epitaxy on Al ₂ O ₃ and YSZ substrates in plasma generated by gyrotron radiation under electron cyclotron resonance conditions. Technical Physics Letters, 2013, 39, 51-54.	0.7	2
87	Monocrystalline InN Films Grown at High Rate by Organometallic Vapor Phase Epitaxy with Nitrogen Plasma Activation Supported by Gyrotron Radiation. Japanese Journal of Applied Physics, 2013, 52, 110201.	1.5	3
88	Indium Nitride Film Growth by Metal Organic Chemical Vapor Deposition with Nitrogen Activation in Electron Cyclotron Resonance Discharge Sustained by 24 GHz Gyrotron Radiation. Japanese Journal of Applied Physics, 2013, 52, 08JD07.	1.5	1
89	Source for extreme ultraviolet lithography based on plasma sustained by millimeter-wave gyrotron radiation. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2012, 11, 021123-1.	0.9	14
90	Towards 0.99999 28Si. Solid State Communications, 2012, 152, 455-457.	1.9	13

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91	Generation of high charge state metal ion beams by electron cyclotron resonance heating of vacuum arc plasma in cusp trap. Review of Scientific Instruments, 2012, 83, 02A309.	1.3	2
92	Multicharged ion source based on Penning-type discharge with electron cyclotron resonance heating by millimeter waves. Review of Scientific Instruments, 2012, 83, 02A325.	1.3	1
93	Gyrotron heating of vacuum arc plasma for high charge state metal ion beam generation. , 2012, , .		0
94	Chlorine-free plasma-based vapour growth of GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 440-444.	0.8	3
95	On the feasibility of electron cyclotron heating of overcritical plasma in a magnetic mirror trap. Plasma Physics Reports, 2012, 38, 443-449.	0.9	1
96	Formation of Multicharged Metal Ions in Vacuum Arc Plasma Heated by Gyrotron Radiation. Plasma Science and Technology, 2011, 13, 596-599.	1.5	3
97	He ²⁺ source based on Penning-type discharge with electron cyclotron resonant heating by millimeter waves. Plasma Sources Science and Technology, 2011, 20, 035014.	3.1	1
98	Experimental investigations of silicon tetrafluoride decomposition in ECR discharge plasma. Review of Scientific Instruments, 2011, 82, 063503.	1.3	23
99	On the Possibility of ECR-Discharge with Overcritical Plasma Density in Axisymmetrical Magnetic Trap. Fusion Science and Technology, 2011, 59, 223-225.	1.1	1
100	An extreme ultraviolet radiation source based on plasma heated by millimeter range radiation. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 64-66.	0.6	5
101	Short-pulse ECR: A source of multiply charged ions. Technical Physics, 2010, 55, 1797-1801.	0.7	1
102	Plasma magneto-compressional cyclotron maser. , 2010, , .		0
103	Glow plasma trigger for electron cyclotron resonance ion sources. Review of Scientific Instruments, 2010, 81, 02A305.	1.3	3
104	Extreme-ultraviolet source based on the electron-cyclotron-resonance discharge. JETP Letters, 2008, 88, 95-98.	1.4	12
105	High current multicharged metal ion source using high power gyrotron heating of vacuum arc plasma. Review of Scientific Instruments, 2008, 79, 02B304.	1.3	4
106	Source of multicharged ions and extreme ultraviolet radiation based on plasma sustained by gyrotron radiation. , 2008, , .		0
107	Noise suppression and stabilization of an ion beam extracted from dense plasma. Journal of Applied Physics, 2007, 102, 054504.	2.5	3
108	High current ECR source of multicharged ion beams. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 537-542.	1.4	35

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109	Observation of pulsed fast electron precipitations and the cyclotron generation mechanism of burst activity in a decaying ECR discharge plasma. <i>Journal of Experimental and Theoretical Physics</i> , 2007, 104, 296-306.	0.9	27
110	Multiple ionization of vacuum-arc-generated metal ions in a magnetic trap heated by high-power microwave radiation. <i>Technical Physics Letters</i> , 2007, 33, 872-874.	0.7	10
111	Maser based on cyclotron resonance in a decaying plasma. <i>JETP Letters</i> , 2006, 84, 314-319.	1.4	22
112	Multicharged Ion Generation in Plasma Created by Millimeter Waves and Confined in a Cusp Magnetic Trap. <i>Fusion Science and Technology</i> , 2005, 47, 345-347.	1.1	21
113	Generation of multiply charged refractory metals in an electron-cyclotron resonant discharge in a direct magnetic trap. <i>Technical Physics</i> , 2005, 50, 1207-1211.	0.7	16
114	Laboratory modeling of nonstationary processes in space cyclotron masers: First results and prospects. <i>Plasma Physics Reports</i> , 2005, 31, 927-937.	0.9	21
115	Multiple Ionization Of Metal Ions By ECR Heating Of Electrons In Vacuum Arc Plasmas. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	1
116	High current density ion beam formation from plasma of electron cyclotron resonance discharge. <i>Review of Scientific Instruments</i> , 2004, 75, 1675-1677.	1.3	23
117	Multiple ionization of metal ions by ECR heating of electrons in vacuum arc plasmas. <i>Review of Scientific Instruments</i> , 2004, 75, 1888-1890.	1.3	35
118	Electron density and energy distribution function in the plume of a Hall-type thruster. <i>Review of Scientific Instruments</i> , 2002, 73, 931-933.	1.3	1
119	Resonant increase of x-ray emission in a microwave discharge at half-gyrofrequency. <i>Physics of Plasmas</i> , 2002, 9, 2781-2785.	1.9	2
120	High current density production of multicharged ions with ECR plasma heated by gyrotron transmitter. <i>Review of Scientific Instruments</i> , 2002, 73, 528-530.	1.3	16
121	Mirror-Trapped Plasma Heated by High-Power Millimeter-Wave Radiation as an Electron-Cyclotron-Resonance Source of Soft X-Rays. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 1016-1017.	1.5	0
122	Soft X-rays generated by the electron-cyclotron resonance discharge in heavy gases sustained by a high-power microwave beam in a magnetic trap. <i>Technical Physics Letters</i> , 2000, 26, 1075-1077.	0.7	9
123	Formation of multi-charged ions and plasma stability at quasigasdynamic plasma confinement in a mirror magnetic trap. <i>Review of Scientific Instruments</i> , 2000, 71, 669-671.	1.3	39
124	Plasma parameters of an electron cyclotron resonance discharge in a magnetic mirror in a quasi-gasdynamic confinement regime. <i>Technical Physics Letters</i> , 1999, 25, 588-589.	0.7	21
125	Dense nonequilibrium plasma produced by powerful millimeter wave radiation. , 0, , .		0
126	TUNGSTEN CARBIDE NANOPOWDER SYNTHESIS UNDER THE EXPOSURE OF 24 GHZ GYROTRON RADIATION ON THE NANOCOMPOSITE OF THE W-C SYSTEM OBTAINED IN A THERMAL PLASMA. , 0, , .		0