Shakhatov Vyacheslav

List of Publications by Year
in descending order

66	725	567281	610901
papers	citations	15 h-index	24 g-index

67	67	67	458
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optical emission spectroscopy and modeling of plasma produced by laser ablation of titanium oxides. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 753-776.	2.9	56
2	CARS study of the vibrational kinetics of nitrogen molecules in the burning and afterglow stages of a pulsed discharge. Technical Physics, 1997, 42, 487-494.	0.7	50
3	Spectroscopic investigation of the technique of plasma assisted pulsed laser deposition of titanium dioxide. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 1459-1472.	2.9	39
4	Dielectric Barrier Discharge Processing of trans-CF3CH=CHF and CF3C(O)CF(CF3)2, Their Mixtures with Air, N2, CO2 and Analysis of Their Decomposition Products. Plasma Chemistry and Plasma Processing, 2015, 35, 845-862.	2.4	35
5	Measurement of vibrational, gas, and rotational temperatures of H2 (X1Î£g+) in radio frequency inductive discharge plasma by multiplex coherent anti-Stokes Raman scattering spectroscopy technique. Physics of Plasmas, 2005, 12, 023504.	1.9	33
6	Kinetics of excitation of N2(A 3Î£ u + , v A), N2(C 3Î u , v c), and N2(B 3Î g , v B) in nitrogen discharge plasmas as studied by means of emission spectroscopy and computer simulation. High Energy Chemistry, 2008, 42, 170-204.	0.9	32
7	Plasma-assisted pulsed laser deposition for the improvement of the film growth process. Applied Surface Science, 2002, 186, 533-537.	6.1	30
8	Electrode microwave discharge and plasma self-organization. Journal of Physics: Conference Series, 2006, 44, 30-39.	0.4	27
9	Spectroscopy of microwave discharge in liquid C7â€“C16 hydrocarbons. High Temperature, 2014, 52, 319-327.	1.0	25
10	Microwave discharge in liquid nâ€heptane with and without bubble flow of argon. Plasma Processes and Polymers, 2019, 16, 1800198.	3.0	22
11	Nonequilibrium vibrational excitation of H2 in radiofrequency discharges: A theoretical approach based on coherent anti-Stokes Raman spectroscopy measurements. Physics of Plasmas, 2005, 12, 073301.	1.9	21
12	Diagnostics of a nonequilibrium nitrogen plasma from the emission spectra of the second positive system of N2. Plasma Physics Reports, 2006, 32, 56-71.	0.9	21
13	Spectroscopic investigation of liquid helium excited by a corona discharge: evidence for bubbles and â€œred satellitesâ€• EPJ Applied Physics, 2009, 47, 22821.	0.7	20
14	Study of positive column of glow discharge in nitrogen by optical emission spectroscopy and numerical simulation. Plasma Sources Science and Technology, 2009, 18, 025032.	3.1	20
15	Physics and microstructure of electrode microwave discharge. Journal Physics D: Applied Physics, 2008, 41, 194001.	2.8	19
16	Collisional-radiative model of hydrogen low-temperature plasma: Processes and cross sections of electron-molecule collisions. High Temperature, 2011, 49, 257-302.	1.0	15
17	Luminescence from Liquid Helium Excited by Corona Discharges. IEEE Transactions on Dielectrics and Electrical Insulation, 2009, 16, 742-750.	2.9	14
18	Theoretical and experimental CARS rotational distributions of H $mathsf{_{2}(X^1Sigma_g^ +)}$ in a radio-frequency capacitive discharge plasma. European Physical Journal D, 2004, 29, 235-245.	1.3	13

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19	Effects of the plasma-facing materials on the negative ionH^â</sup>density in an ECR (2.45) Tj ETQq1 1 0.784314 rgBT	3.1	13
20	Excitation kinetics of electronic states of hydrogen molecules in nonequilibrium discharges: Electronic ground state. High Temperature, 2015, 53, 569-587.	1.0	12
21	Electrode microwave discharge in nitrogen: Structure and gas temperature. Plasma Physics Reports, 2007, 33, 157-166.	0.9	11
22	Radiation spectroscopy in the study of the influence of a helium-nitrogen mixture composition on parameters of DC glow discharge and microwave discharge. High Temperature, 2012, 50, 658-681.	1.0	10
23	Studies of the distribution functions of molecular nitrogen and its ion over the vibrational and rotational levels in the dc glow discharge and the microwave discharge in a nitrogen-hydrogen mixture by the emission spectroscopy technique. High Temperature, 2013, 51, 551-565.	1.0	10
24	Some Results from Studies of Microwave Discharges in Liquid Heavy Hydrocarbons. Plasma Physics Reports, 2018, 44, 145-148.	0.9	10
25	Gas temperature in the microwave discharge in liquid n-heptane with argon bubbling. European Physical Journal D, 2019, 73, 1.	1.3	10
26	CARS spectroscopy of radio-frequency discharge plasma in hydrogen. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2007, 103, 468-481.	0.6	9
27	Comparative study of degradation of trans-1,3,3,3-trifluoropropene, 2,3,3,3-tetrafluoropropene, perfluoro-3-methylbutanone-2, and sulfur hexafluoride in dielectric-barrier discharge. High Energy Chemistry, 2016, 50, 64-70.	0.9	9
28	Microwave electrode discharge in nitrogen: Structure and characteristics of the electrode region. Plasma Physics Reports, 2008, 34, 562-573.	0.9	8
29	Nonuniform microwave discharge in a nitrogen-hydrogen mixture. High Temperature, 2010, 48, 315-320.	1.0	8
30	Electrode microwave discharge: Areas of application and recent results of discharge physics. Journal of Physics: Conference Series, 2010, 207, 012002.	0.4	8
31	Emission spectroscopy of a dipolar plasma source in hydrogen under low pressures. High Temperature, 2016, 54, 467-474.	1.0	8
32	Optical emission spectra of microwave discharge in different liquid hydrocarbons. Plasma Processes and Polymers, 2020, 17, 2000003.	3.0	8
33	Synthesis of Nitrogen Oxides in a Subthreshold Microwave Discharge in Air and in Air Mixtures with Methane. Plasma Physics Reports, 2020, 46, 311-319.	0.9	8
34	Spectroscopic Studies of Longitudinal Discharges in a Supersonic Air Flow during the Injection of Propane, Ethylene, and Oxygen into the Discharge Zone. High Temperature, 2019, 57, 798-807.	1.0	8
35	Investigation of the Glow and Contracted Discharge Plasmas in Nitrogen by Coherent Anti-Stokes Raman Spectroscopy, Optical Interferometry, and Numerical Simulation. Technical Physics, 2005, 50, 1592.	0.7	7
36	Kinetics of electron states of hydrogen molecules in nonequilibrium discharges: Singlet states. High Temperature, 2016, 54, 124-143.	1.0	7

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37	Detection of rovibrationally excited molecular hydrogen in the electronic ground state via synchrotron radiation. Applied Physics Letters, 2017, 111, .	3.3	7
38	Kinetics of populations of singlet and triplet states in non-equilibrium hydrogen plasma. Journal Physics D: Applied Physics, 2018, 51, 213001.	2.8	6
39	Decomposition of Carbon Dioxide in Microwave Discharges (an Analytical Review). Russian Journal of Applied Chemistry, 2022, 95, 1-20.	0.5	6
40	Fast two-wavelength CARS thermometry of gas discharges. Quantum Electronics, 1994, 24, 832-835.	1.0	3
41	Two-wavelength CARS thermometry based onS-branch rotational transitions in the hydrogen molecule. Quantum Electronics, 1997, 27, 1019-1023.	1.0	3
42	<title>Plasma-assisted pulsed laser deposition of titanium dioxide</title>. , 2000, 4070, 394.		3
43	Local nonintrusive diagnostics of electron components of plasma glow discharge in nitrogen by CARS spectroscopy. , 2002, , .		3
44	Investigation of nonequilibrium rf-discharge plasma in nitrogen using the method of wide-band CARS spectroscopy. High Temperature, 2006, 44, 12-21.	1.0	3
45	CARS spectroscopy and optical interferometry of glow discharge plasma in nitrogen. High Temperature, 2006, 44, 206-215.	1.0	3
46	The parameters of nonequilibrium microwave discharge in nitrogen in a tube in a rectangular waveguide. High Temperature, 2006, 44, 795-803.	1.0	3
47	Spectral researches on interaction of laser radiation with targets from titanium oxides. High Energy Chemistry, 2007, 41, 463-469.	0.9	3
48	Spectroscopic investigations of corona discharge in high pressure helium at 300ÂK. EPJ Applied Physics, 2011, 55, 13809.	0.7	3
49	The role of secondary processes in kinetics of triplet states of a hydrogen molecule in an ECR discharge. Journal of Physics: Conference Series, 2017, 927, 012052.	0.4	3
50	Analysis of Data on the Cross Sections for Electron-Impact Ionization and Excitation of Electronic States of Atomic Hydrogen (Review). Plasma Physics Reports, 2018, 44, 161-170.	0.9	3
51	Experimental investigation of powder formation in SiF4-H2and SiH4-H2r.f. discharges. Plasma Sources Science and Technology, 1999, 8, 279-284.	3.1	2
52	Thin film deposition by means of laser ablation of titanium oxide targets in oxygen radiofrequency electrode plasma. High Energy Chemistry, 2008, 42, 141-144.	0.9	2
53	Development of a nonequilibrium microwave discharge at the end of a cylindrical electrode in nitrogen at reduced pressures. Plasma Physics Reports, 2010, 36, 182-189.	0.9	2
54	On the applicability of the optical emission of triplet states of hydrogen molecules for the diagnostics of non-equilibrium microwave hydrogen discharge. High Temperature, 2017, 55, 496-501.	1.0	2

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55	Spectra, line intensities of the C 1Î£ g + â‡' A 1Î£ u + and c 3Î£ g + â‡' a 3Î£ u. High Temperature, 2017, 55, 165-173.	1.0	2
56	Nonmonotonic distribution of population of the a 3Î£ u + triplet state rotational levels in corona discharge in cryogenic helium gas. High Temperature, 2017, 55, 326-333.	1.0	2
57	Analysis of applicability of triplet-state emission of molecular hydrogen for spectral diagnostics of a DC discharge. Plasma Physics Reports, 2017, 43, 1016-1030.	0.9	2
58	Measurement of Gas Temperature and Rotational Distribution of H2(X1Sg+) in a Radio-Frequency Capacitive Discharge PLasma by CARS Spectroscopy Techniques. , 2003, , .		1
59	Kinetic models of nonequilibrium nitrogen and hydrogen plasma for diagnostics of gas discharges. Journal of Physics: Conference Series, 2010, 207, 012001.	0.4	1
60	Atomic and molecular spectra of normal liquid4He excited by corona discharges. Low Temperature Physics, 2011, 37, 378-383.	0.6	1
61	Spectroscopic investigation of corona discharge in liquid Helium. , 2008, , .		0
62	Spectra emitted by helium excited by corona discharge. , 2011, , .		0
63	Molecular and atomic spectra emitted by normal liquid and supercritical ⁴He excited by corona discharge. , 2014, , .		0
64	Advanced spectral diagnostics to study electrical discharges in dense fluids. , 2017, , .		0
65	On the Mechanism of the Population of the $${{{ext{H}}}_{2}}left({{{d}^{3}}{{Pi }_{u}}} ight)$$ State in Nonequilibrium Hydrogen Plasma. High Temperature, 2019, 57, 458-461.	1.0	0
66	Non-equilibrium Kinetics of Dissociation of Molecular Hydrogen in Microwave Discharge in Liquid Hydrocarbons. Plasma Physics Reports, 2020, 46, 823-836.	0.9	0