Alexander M Starik

List of Publications by Year
in descending order

188	2,340	236925	330143
papers	citations	25 h-index	37 g-index

189	189	189	1126
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ignition and early stage combustion of H2â€“O2 mixture upon the photodissociation of O2 molecules by UV laser radiation: Experimental and numerical study. Combustion and Flame, 2019, 200, 32-43.	5.2	7
2	Analysis of emission characteristics of gas turbine engines with some alternative fuels. International Journal of Green Energy, 2018, 15, 161-168.	3.8	20
3	The formation of (Al2O3)n clusters as a probable mechanism of aluminum oxide nucleation during the combustion of aluminized fuels: Numerical analysis. Combustion and Flame, 2018, 196, 223-236.	5.2	18
4	Numerical Analysis of Hydrogen Sulphide Conversion to Hydrogen during Its Pyrolysis and Partial Oxidation. Combustion, Explosion and Shock Waves, 2018, 54, 136-146.	0.8	8
5	Combustion improvement in HCCI engine operating on synthesis gas via addition of ozone or excited oxygen molecules to the charge: Modeling study. International Journal of Hydrogen Energy, 2017, 42, 10475-10484.	7.1	12
6	Modeling study of hydrogen production via partial oxidation of H 2 Sâ€“H 2 O blend. International Journal of Hydrogen Energy, 2017, 42, 10854-10866.	7.1	16
7	Quantum chemical study of small Al n B m clusters: Structure and physical properties. Chemical Physics, 2017, 493, 61-76.	1.9	11
8	The influence of vibrations of polyatomic molecules on dipole moment and static dipole polarizability: theoretical study. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 165101.	1.5	22
9	Numerical analysis of combustion of a hydrogenâ€“air mixture in an advanced ramjet combustor model during activation of O2 molecules by resonant laser radiation. Combustion, Explosion and Shock Waves, 2017, 53, 249-261.	0.8	5
10	Numerical Study of the Influence of the Photochemical Activation of Oxygen Molecules on Homogeneous Charge Compression Ignition Performance. Energy & Fuels, 2017, 31, 8608-8618.	5.1	1
11	Modeling study of the acceleration of ignition in ethaneâ€“air and natural gasâ€“air mixtures via photochemical excitation of oxygen molecules. Combustion and Flame, 2017, 176, 81-93.	5.2	17
12	An improved model of homogeneous nucleation for high supersaturation conditions: aluminum vapor. Physical Chemistry Chemical Physics, 2017, 19, 523-538.	2.8	13
13	Numerical and experimental analysis of propaneâ€“hydrogen mixture ignition in air. Journal of Physics: Conference Series, 2016, 774, 012083.	0.4	3
14	Analysis of the mechanisms of ignition and combustion of i-C8H18â€“H2 and n-C10H22â€“H2 fuel blends in air. Combustion, Explosion and Shock Waves, 2016, 52, 631-642.	0.8	7
15	Influence of vibrations and rotations of diatomic molecules on their physical properties: I. Dipole moment and static dipole polarizability. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 125102.	1.5	20
16	Influence of vibrations and rotations of diatomic molecules on their physical properties: II. Refractive index, reactivity and diffusion coefficients. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 125103.	1.5	20
17	Theoretical study of physical and thermodynamic properties of AlnNm clusters*. European Physical Journal D, 2016, 70, 1.	1.3	11
18	Theoretical study of thermochemical properties of Al_nC_mclusters. Physica Scripta, 2016, 91, 013004.	2.5	11

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19	Theoretical Study of the Reactions of Methane and Ethane with Electronically Excited N₂(A³Î£_u⁺). Journal of Physical Chemistry A, 2016, 120, 4349-4359.	2.5	13
20	Enhancement of hydrogen sulfide oxidation via excitation of oxygen molecules to the singlet delta state. Combustion and Flame, 2016, 170, 124-134.	5.2	14
21	Kinetic analysis of n-decaneâ€“hydrogen blend combustion in premixed and non-premixed supersonic flows. Combustion Theory and Modelling, 2016, 20, 99-130.	1.9	5
22	Modeling study of combustion and pollutant formation in HCCI engine operating on hydrogen rich fuel blends. International Journal of Hydrogen Energy, 2016, 41, 3689-3700.	7.1	35
23	Quantum chemical study of the reactions of Al, AlO and AlOH with H2O2. Chemical Physics, 2016, 465-466, 9-16.	1.9	6
24	Physical and Thermodynamic Properties of Al_nC_m Clusters: Quantum-Chemical Study. Journal of Physical Chemistry A, 2015, 119, 1369-1380.	2.5	29
25	High-efficiency parallel-plate wet scrubber (PPWS) for soluble gas removal. Separation and Purification Technology, 2015, 142, 189-195.	7.9	11
26	Experimental study of combustion of composite fuel comprising n-decane and aluminum nanoparticles. Combustion and Flame, 2015, 162, 3554-3561.	5.2	46
27	Theoretical study of partial oxidation of methane by non-equilibrium oxygen plasma to produce hydrogen rich syngas. International Journal of Hydrogen Energy, 2015, 40, 9872-9884.	7.1	14
28	Physics and chemistry of the influence of excited molecules on combustion enhancement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140341.	3.4	42
29	Theoretical Study of the Reactions of Ethanol with Aluminum and Aluminum Oxide. Journal of Physical Chemistry A, 2015, 119, 3897-3904.	2.5	15
30	Specific features of ignition and combustion of composite fuels containing aluminum nanoparticles (Review). Combustion, Explosion and Shock Waves, 2015, 51, 197-222.	0.8	29
31	A modified model of mode approximation for nitrogen plasma based on the state-to-state approach. Plasma Sources Science and Technology, 2015, 24, 055008.	3.1	11
32	Quantum chemical study of small BnCm cluster structures and their physical properties. European Physical Journal D, 2015, 69, 1.	1.3	24
33	Numerical analysis of nanoaluminum combustion in steam. Combustion and Flame, 2014, 161, 1659-1667.	5.2	44
34	The features of ignition and combustion of composite propane-hydrogen fuel: Modeling study. International Journal of Hydrogen Energy, 2014, 39, 6764-6773.	7.1	21
35	Theoretical evaluation of diffusion coefficients of (Al2O3)n clusters in different bath gases. European Physical Journal D, 2014, 68, 1.	1.3	31
36	Kinetics of Ignition and Combustion in the Alâ€“CH₄â€“O₂ System. Energy & Fuels, 2014, 28, 6579-6588.	5.1	25

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37	Modeling Study of the Possibility of HCCI Combustion Improvement via Photochemical Activation of Oxygen Molecules. Energy & Fuels, 2014, 28, 2170-2178.	5.1	13
38	Application of reactor net models for the simulation of gas-turbine combustor emissions. International Journal of Sustainable Aviation, 2014, 1, 43.	0.2	5
39	Kinetics of oxidation and combustion of complex hydrocarbon fuels: Aviation kerosene. Combustion, Explosion and Shock Waves, 2013, 49, 392-408.	0.8	23
40	On mechanisms of formation of environmentally harmful compounds in homogeneous combustors. Combustion, Explosion and Shock Waves, 2013, 49, 520-535.	0.8	10
41	Numerical study of the enhancement of combustion performance in a scramjet combustor due to injection of electric-discharge-activated oxygen molecules. Plasma Sources Science and Technology, 2013, 22, 065007.	3.1	11
42	Kinetics of plasmachemical processes in the expanding flow of nitrogen plasma. Physica Scripta, 2013, 88, 058306.	2.5	10
43	Theoretical study of structure and physical properties of (Al₂O₃)_nclusters. Physica Scripta, 2013, 88, 058307.	2.5	20
44	Analysis of the reaction and quenching channels in a H + O₂(a¹Î”_g) system. Physica Scripta, 2013, 88, 058305.	2.5	15
45	Invited papers from the International Symposium on Nonequilibrium Processes, Plasma, Combustion and Atmospheric Phenomena. Physica Scripta, 2013, 88, 058303.	2.5	0
46	Evaluation of Prediction Ability of Detailed Reaction Mechanisms in the Combustion Performance in Hydrogen/Air Supersonic Flows. Combustion Science and Technology, 2013, 185, 62-94.	2.3	26
47	Thermally nonequilibrium effects in shock-induced nitrogen plasma: modelling study. Plasma Sources Science and Technology, 2013, 22, 035013.	3.1	18
48	On the influence of singlet oxygen molecules on characteristics of HCCI combustion: A numerical study. Combustion Theory and Modelling, 2013, 17, 579-609.	1.9	29
49	Impact of Operating Regime on Aviation Engine Emissions: Modeling Study. Journal of Propulsion and Power, 2013, 29, 709-717.	2.2	12
50	On the influence of singlet oxygen molecules on the NOx formation in methane-air laminar flame. Proceedings of the Combustion Institute, 2013, 34, 3277-3285.	3.9	14
51	Evaluation of the reaction rate constants for the gas-phase Al-CH₄â€“air combustion chemistry. Combustion Theory and Modelling, 2012, 16, 842-868.	1.9	23
52	Theoretical Study of the Reaction of Ethane with Oxygen Molecules in the Ground Triplet and Singlet Delta States. Journal of Physical Chemistry A, 2012, 116, 8444-8454.	2.5	27
53	Comprehensive analysis of combustion enhancement mechanisms in a supersonic flow of CH₄â€“O₂mixture with electric-discharge-activated oxygen molecules. Plasma Sources Science and Technology, 2012, 21, 035015.	3.1	18
54	Numerical study of combustion initiation in a supersonic flow of H2â€“air mixture by resonance laser radiation. Journal Physics D: Applied Physics, 2012, 45, 085401.	2.8	5

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55	Application of state-to-state approach in estimation of thermally nonequilibrium reaction rate constants in mode approximation. Chemical Physics, 2012, 398, 73-80.	1.9	29
56	Kinetic mechanism of COâ€“H2 system oxidation promoted by excited singlet oxygen molecules. Combustion and Flame, 2012, 159, 16-29.	5.2	23
57	Kinetics of Al + H₂O Reaction: Theoretical Study. Journal of Physical Chemistry A, 2011, 115, 4476-4481.	2.5	40
58	On kinetic mechanisms of n-decane oxidation. Combustion, Explosion and Shock Waves, 2011, 47, 129-146.	0.8	21
59	Kinetic mechanism of propane ignition and combustion in air. Combustion, Explosion and Shock Waves, 2011, 47, 249-264.	0.8	24
60	Theoretical Study of the Reaction of Carbon Monoxide with Oxygen Molecules in the Ground Triplet and Singlet Delta States. Journal of Physical Chemistry A, 2011, 115, 1795-1803.	2.5	15
61	Theoretical analysis of reaction kinetics with singlet oxygen molecules. Physical Chemistry Chemical Physics, 2011, 13, 16424.	2.8	50
62	Kinetic processes in the plasma formed in combustion of hydrocarbon fuels. Journal of Engineering Physics and Thermophysics, 2011, 84, 100-124.	0.6	4
63	Intensification of shock-induced combustion by electric-discharge-excited oxygen molecules: numerical study. Combustion Theory and Modelling, 2010, 14, 653-679.	1.9	37
64	On the influence of singlet oxygen molecules on the speed of flame propagation in methaneâ€“air mixture. Combustion and Flame, 2010, 157, 313-327.	5.2	71
65	Syngas Oxidation Mechanism. Combustion, Explosion and Shock Waves, 2010, 46, 491-506.	0.8	52
66	Intensification of syngas ignition through the excitation of CO molecule vibrations: a numerical study. Journal Physics D: Applied Physics, 2010, 43, 245501.	2.8	12
67	Comprehensive analysis of the effect of atomic and molecular metastable state excitation on air plasma composition behind strong shock waves. Plasma Sources Science and Technology, 2010, 19, 015007.	3.1	48
68	The Effect of the Vibrational Excitation of Molecules on the Shock-Induced Combustion in a Syngas-Air Mixture. Combustion Science and Technology, 2010, 183, 75-103.	2.3	17
69	10.1007/s11454-008-2014-1. , 2010, 53, 235.		0
70	Comprehensive analysis of combustion initiation in methaneâ€“air mixture by resonance laser radiation. Journal Physics D: Applied Physics, 2009, 42, 175503.	2.8	27
71	Modeling study of gas-turbine combustor emission. Proceedings of the Combustion Institute, 2009, 32, 2941-2947.	3.9	31
72	Modeling of vibrationâ€“electronicâ€“chemistry coupling in the atomicâ€“molecular oxygen system. Chemical Physics, 2009, 360, 18-26.	1.9	21

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73	The promotion of ignition in a supersonic H2â€“air mixing layer by laser-induced excitation of O2 molecules: Numerical study. Combustion and Flame, 2009, 156, 1641-1652.	5.2	30
74	Intensification of hydrogen-oxygen mixture combustion in subsonic flow due to excitation of O2 molecules to the a 1Î” g electronic state in electric discharge. Doklady Physics, 2009, 54, 67-71.	0.7	10
75	On coagulation mechanisms of charged nanoparticles produced by combustion of hydrocarbon and metallized fuels. Journal of Experimental and Theoretical Physics, 2009, 108, 326-339.	0.9	7
76	Ignition of a combustible gas mixture by a high-current electric discharge in a closed volume. Plasma Physics Reports, 2009, 35, 471-483.	0.9	9
77	Laser-initiated ignition of hydrogen-air mixtures. Technical Physics, 2009, 54, 354-364.	0.7	5
78	Initiation of combustion of a CH4-O2 mixture in a supersonic flow with excitation of O2 molecules by an electric discharge. Combustion, Explosion and Shock Waves, 2008, 44, 249-261.	0.8	17
79	Enhancement of combustion of a hydrogen-air mixture by excitation of O2 molecules to the a 1Î” g state. Combustion, Explosion and Shock Waves, 2008, 44, 371-379.	0.8	22
80	Thermally nonequilibrium processes occurring during the ignition of hydrocarbon-air mixtures behind shock waves. Russian Journal of Physical Chemistry B, 2008, 2, 722-731.	1.3	4
81	Features of the formation of charged and neutral nanoparticles in hydrocarbon-air flames. Doklady Physics, 2008, 53, 312-317.	0.7	2
82	Initiation of combustion of a hydrogen-air mixture with ozone impurity by UV laser radiation. Technical Physics, 2008, 53, 235-243.	0.7	10
83	On the influence of electronically excited oxygen molecules on combustion of hydrogenâ€“oxygen mixture. Journal Physics D: Applied Physics, 2008, 41, 192001.	2.8	71
84	Control of combustion by electrical-discharge-excited oxygen molecules. , 2008, , .		0
85	Kinetic processes in dusty plasmas produced by shock wave. , 2008, , .		0
86	On mechanisms of a flame velocity increase upon activation of O₂molecules in electrical discharge. Journal Physics D: Applied Physics, 2008, 41, 125206.	2.8	21
87	Formation of charged nanoparticles in hydrocarbon flames: principal mechanisms. Plasma Sources Science and Technology, 2008, 17, 045012.	3.1	16
88	Initiation of diffusion combustion in a supersonic flow of H2â€“air mixture by electrical-discharge-excited oxygen molecules. Journal Physics D: Applied Physics, 2008, 41, 125210.	2.8	5
89	Evolution of charged species in propane/air flames: mass-spectrometric analysis and modelling. Plasma Sources Science and Technology, 2007, 16, 161-172.	3.1	33
90	Hydration of aircraft engine soot particles under plume conditions: Effect of sulfuric and nitric acid processing. Journal of Geophysical Research, 2007, 112, .	3.3	18

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91	Aircraft-generated soot aerosols: Physicochemical properties and effects of emission into the atmosphere. Izvestiya - Atmospheric and Oceanic Physics, 2007, 43, 125-141.	0.9	10
92	Numerical modeling of the formation of aerosol particles in jet engine plumes. Fluid Dynamics, 2007, 42, 33-43.	0.9	1
93	Mechanism of the initiation of combustion in CH4(C2H2)/Air/O3 mixtures by laser excitation of the O3 molecules. Kinetics and Catalysis, 2007, 48, 348-366.	1.0	20
94	Initiation of a detonation wave by resonant laser radiation in a hydrogen-oxygen mixture flowing about a wedge. Technical Physics, 2007, 52, 39-46.	0.7	1
95	On combustion enhancement mechanisms in the case of electrical-discharge-excited oxygen molecules. Technical Physics, 2007, 52, 1281-1290.	0.7	14
96	Numerical modeling of the formation of aerosol particles in jet engine plumes. Fluid Dynamics, 2007, 42, 33-43.	0.9	0
97	<title>Laser-induced excitation of target molecules as an efficient approach to control the combustion and technological chemical processes</title>. , 2006, 6053, 245.		0
98	Mechanisms of the IR laser initiation of combustion in a supersonic H2/O3/O2 flow. Kinetics and Catalysis, 2006, 47, 333-340.	1.0	7
99	Intensification of the oxidation of rich methane/air mixtures by O2 molecules excited to the a 1Î”g state. Kinetics and Catalysis, 2006, 47, 487-496.	1.0	15
100	Interaction of ions and electrons with nanoparticles in hydrocarbon combustion plasmas. Technical Physics, 2006, 51, 444-452.	0.7	15
101	Initiation of combustion by laser-induced excitation of molecular vibrations of reactants. Journal of Russian Laser Research, 2006, 27, 533-551.	0.6	5
102	Numerical Study of Formation of a Detonation Wave in a Supersonic Flow over a Wedge by an H2-O2 Mixture with Nonequilibrium Excitation of Molecular Vibrations of Reagents. Combustion, Explosion and Shock Waves, 2006, 42, 68-75.	0.8	12
103	Control of combustion by generation of singlet oxygen molecules in electrical discharge. European Physical Journal D, 2006, 56, B1357-B1363.	0.4	19
104	On mechanisms of intensifying combustion due to the simultaneous excitation of vibrational and electronic states of reacting molecules. Doklady Physics, 2005, 50, 252-257.	0.7	6
105	Initiation of Combustion in a Supersonic Hydrogen-Air Mixture Flow by CO2-Laser Radiation. Fluid Dynamics, 2005, 40, 305-314.	0.9	1
106	35S Tracer study of the effect of support nature on the dynamics of the active sites of CoMo and NiMo sulfide catalysts supported on Al 2O3 and activated carbon. Kinetics and Catalysis, 2005, 46, 77-87.	1.0	1
107	Activation of Chain Processes in Combustible Mixtures by Laser Excitation of Molecular Vibrations of Reactants. Combustion, Explosion and Shock Waves, 2005, 41, 386-394.	0.8	16
108	KINETICS OF CHARGED NANOPARTICLES FORMATION DURING COMBUSTION OF HYDROCARBON/AIR MIXTURES. Journal of Aerosol Science, 2004, 35, S821-S822.	3.8	0

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109	Kinetics of low-temperature initiation of H2/O2/H2O mixture combustion upon the excitation of molecular vibrations in H2O molecules by laser radiation. Technical Physics, 2004, 49, 76-82.	0.7	10
110	Mechanism of the electric charging of soot particles upon the combustion of hydrocarbon fuels. Doklady Physics, 2004, 49, 441-446.	0.7	5
111	Initiation of combustion of a methane-air mixture in a supersonic flow behind a shock wave during laser excitation of O2 molecules. Technical Physics, 2004, 49, 1116-1125.	0.7	7
112	Kinetic Mechanisms of Ignition of Isooctaneâ€“Air Mixtures. Combustion, Explosion and Shock Waves, 2004, 40, 36-56.	0.8	3
113	Possibility of Initiation of Combustion of CH4â€“O2(Air) Mixtures with Laser-Induced Excitation of O2Molecules. Combustion, Explosion and Shock Waves, 2004, 40, 499-510.	0.8	27
114	Electric Charging of Soot Particles in Aircraft Engine Exhaust Plumes. Fluid Dynamics, 2004, 39, 384-392.	0.9	7
115	On the initiation of combustion of O2-O3 mixtures in the course of laser-induced asymmetrical ozone vibrations. Kinetics and Catalysis, 2004, 45, 847-853.	1.0	5
116	Effect of aerosol precursors from gas turbine engines on the volatile sulfate aerosols and ion clusters formation in aircraft plumes. Physical Chemistry Chemical Physics, 2004, 6, 3426.	2.8	18
117	Title is missing!. Kinetics and Catalysis, 2003, 44, 28-39.	1.0	67
118	Kinetic mechanisms of initiating hydrogen-oxygen mixture combustion through the excitation of electronic degrees of freedom of molecular oxygen by laser radiation. Technical Physics, 2003, 48, 334-343.	0.7	5
119	Possibility of intensifying chain reactions in combustible mixtures by laser radiation exciting electronic states of O2 molecules. Doklady Physics, 2003, 48, 398-404.	0.7	5
120	Control of combustion and detonation by means of resonance laser radiation: analysis and potentialities. , 2003, , .		0
121	Ionâ€“soot interaction: a possible mechanism of ion removal in aircraft plume. Journal of Environmental Monitoring, 2003, 5, 265-268.	2.1	11
122	Creation of high-energy far-infrared H 2 O gasdynamic laser: experimental and theoretical studies. , 2002, 4760, 706.		0
123	Initiation of combustion and detonation by laser-induced electronical excitation of O 2 molecules to the a1Î”g and b1Î£g+states. , 2002, 4760, 609.		4
124	Modeling of sulfur gases and chemiions in aircraft engines. Aerospace Science and Technology, 2002, 6, 63-81.	4.8	56
125	Kinetics of Ion Formation in the Volumetric Reaction of Methane with Air. Combustion, Explosion and Shock Waves, 2002, 38, 253-268.	0.8	23
126	Formation Kinetics of Sulfur-Bearing Compounds in Combustion of Hydrocarbon Fuels in Air. Combustion, Explosion and Shock Waves, 2002, 38, 609-621.	0.8	11

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127	Dynamics of Sulfate Aerosol Formation in Engine Jets. Fluid Dynamics, 2001, 36, 95-103.	0.9	4
128	Kinetic mechanisms for the initiation of supersonic combustion of a hydrogen-air mixture behind a shock wave under the excitation of molecular vibrations in initial reagents. Technical Physics, 2001, 46, 929-940.	0.7	14
129	Low-temperature initiation of the detonation combustion of gas mixtures in a supersonic flow under excitation of the O2(a 1Î”g) state of molecular oxygen. Doklady Physics, 2001, 46, 627-632.	0.7	21
130	Hydrophilicity of soot particles formed in the combustion chamber of a jet engine. Technical Physics Letters, 2000, 26, 829-831.	0.7	2
131	On a possibility to reduce the ignition threshold for combustible mixtures by selective excitation of molecular vibrations in initial reagents. Doklady Physics, 2000, 45, 5-10.	0.7	8
132	A decrease in the ignition temperature of molecular systems during nonequilibrium vibrational excitation of reacting molecules. Kinetics and Catalysis, 2000, 41, 589-596.	1.0	7
133	Numerical analysis of combustion kinetics for hydrogenâ€”air mixtures with NH3, CH4, and C2H6 additives behind shock waves. Combustion, Explosion and Shock Waves, 2000, 36, 310-317.	0.8	1
134	Simulation of binary condensation of H2O/H2SO4 in plumes of jet engines using Eulerâ€™s method of fractions. High Temperature, 2000, 38, 77-86.	1.0	5
135	Gas dynamic lasers of a short and medium IR range on halogen molecules: analysis and perspectives. , 2000, 3889, 762.		0
136	Mechanisms of nonstationary self-focusing during pulse IR laser radiation propagation in a gaseous medium. , 2000, , .		1
137	The effect of nonequilibrium processes of H-, N- and S-containing species production in the internal flow of gasturbine engine on the formation of aerosols in aircraft plume. Journal of Aerosol Science, 2000, 31, 382-383.	3.8	3
138	Hydrophilicity and reactivity of aircraft exhaust soot. Journal of Aerosol Science, 2000, 31, 1038-1039.	3.8	0
139	Experimental characterization of aircraft combustor soot: Microstructure, surface area, porosity and water adsorption. Physical Chemistry Chemical Physics, 2000, 2, 4421-4426.	2.8	97
140	Features of nonequilibrium processes of titrogen oxide formation behind strong shock waves in air. Fluid Dynamics, 1999, 34, 110-120.	0.9	3
141	Kinetics of processes in the middle atmosphere during the laser excitation of O2 molecules. Technical Physics, 1998, 43, 890-897.	0.7	2
142	Energetic and spectral characteristics of gas-dynamic and electro-discharge flow lasers on N 2 -DCL mixture. , 1998, , .		0
143	Mechanisms of nonstationary change of refractive index under propagation of pulsed IR laser radiation in the absorbing and amplifying gaseous medium. , 1998, , .		0
144	Changes in the refractive index of a molecular gas in the field of resonant radiation when spectral lines overlap. Quantum Electronics, 1997, 27, 550-555.	1.0	4

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145	Effect of excitation of molecular vibrations on the dynamics of combustion of an H2+O2 mixture behind a detonation shockwave. Journal of Applied Mechanics and Technical Physics, 1995, 36, 818-825.	0.5	1
146	Characteristics of the changes in the refractive index due to interaction of a radiation pulse with an inverted medium. Quantum Electronics, 1994, 24, 340-345.	1.0	5
147	Modeling of the dynamics of the change in the index of refraction during resonance interaction of radiation with vibrational-rotational transitions. Journal of Applied Mechanics and Technical Physics, 1994, 35, 21-28.	0.5	0
148	Kinetics of combustion of H2+O2 mixture with participation of vibrationally excited molecules. Combustion, Explosion and Shock Waves, 1994, 30, 571-581.	0.8	3
149	Analysis of energy and spectral characteristics of a gasdynamic laser with N2-DCl mixing. Journal of Applied Mechanics and Technical Physics, 1994, 34, 455-460.	0.5	1
150	Modeling of diffusion and heat conduction effects on the variation of hydrodynamic parameters during excitation of molecular oscillations by resonance radiation. Journal of Applied Mechanics and Technical Physics, 1993, 34, 1-9.	0.5	0
151	Modeling the dynamics of refractive index variation associated with the absorption of radiation of wavelength ?=10.6 mm by water vapor. Fluid Dynamics, 1993, 27, 399-406.	0.9	1
152	Influence of the macrotransport processes in gases on the change in the hydrodynamic parameters in the presence of a resonance radiation pulse. Fluid Dynamics, 1993, 27, 544-550.	0.9	0
153	Formation of a nonequilibrium energy distribution over vibrational degrees of freedom of the H2O molecule as water vapor expands in a supersonic nozzle. Journal of Applied Mechanics and Technical Physics, 1992, 33, 506-514.	0.5	0
154	Effect of vibrational relaxation on the parameters of molecular gases behind reflected shocks. Fluid Dynamics, 1992, 26, 904-908.	0.9	0
155	Radiation absorption by the 020(550)â†'001(633) transition of H2O behind shock waves. Journal of Quantitative Spectroscopy and Radiative Transfer, 1992, 48, 25-31.	2.3	0
156	Some self-focusing mechanisms for absorption on rotational transitions. Journal of Applied Mechanics and Technical Physics, 1991, 32, 297-305.	0.5	0
157	Discussion of the effect of the intensity of radiation and the parameters of a medium on the change in the refractive index accompanying the absorption of HF-laser radiation by water vapor. Journal of Applied Mechanics and Technical Physics, 1990, 30, 516-521.	0.5	0
158	Propagation of disturbances in supersonic vibrationally nonequilibrium gas flows. Fluid Dynamics, 1990, 25, 272-277.	0.9	0
159	Mechanisms of self-focusing in the interaction of laser radiation with a gaseous medium. Soviet Journal of Quantum Electronics, 1990, 20, 435-440.	0.1	4
160	Study of Mechanisms of Electromagnetic-Fields Therapeutic Effect Elements of Microwave Medical Apparatus. , 1990, , .		0
161	Parameter formation behind the reflected wave in a shock tube with a nozzle. Fluid Dynamics, 1988, 22, 622-628.	0.9	2
162	Effect of the transonic section of the nozzle on the freezing of vibrational energy in a H2-HCl flow. Fluid Dynamics, 1988, 22, 773-778.	0.9	0

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163	Molecular-gas cooling in a resonant radiation field with line overlap. Journal of Applied Mechanics and Technical Physics, 1988, 29, 163-168.	0.5	0
164	Numerical investigation of the process of shock reflection from a wall with a slot hole. Journal of Applied Mechanics and Technical Physics, 1988, 28, 903-909.	0.5	0
165	Influence of radiation intensity and parameters of the medium on the depth of cooling and the change in the index of refraction during the adsorption of radiation with ?=9.2?10.6 ?m by water vapor. Journal of Applied Mechanics and Technical Physics, 1987, 27, 796-802.	0.5	1
166	Effect of spectral line overlap on the pulse shape of the output of a CO2 laser. Journal of Applied Spectroscopy, 1986, 45, 774-778.	0.7	0
167	A method of accounting for the scattered radiation in atomic fluorescence spectrometry. Journal of Applied Spectroscopy, 1986, 44, 130-134.	0.7	0
168	Water vapor cooling when radiation of wavelength ?=2.8 ?m is absorbed. Fluid Dynamics, 1986, 21, 456-465.	0.9	1
169	Thermal effects of the absorption of CO2laser radiation by water vapor. Soviet Journal of Quantum Electronics, 1986, 16, 359-363.	0.1	1
170	Propagation of a radiation pulse with wavelength ?=10.6 ?m in amplifying media. Journal of Applied Mechanics and Technical Physics, 1985, 26, 177-182.	0.5	0
171	Resonance radiation cooling of a diatomic molecule gas flux. Journal of Applied Mechanics and Technical Physics, 1985, 25, 655-663.	0.5	0
172	The flow of a gas consisting of asymmetric dipole molecules in a field of resonance radiation. Fluid Dynamics, 1985, 20, 110-119.	0.9	1
173	Modeling of flows of the products of combustion of hydrocarbon fuels in an impulsive setup of the explosive type. Combustion, Explosion and Shock Waves, 1985, 21, 680-687.	0.8	0
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175	Numerical investigation of the propagation of a pulse of radiation with ?=10.6 ?m through absorbing media. Journal of Applied Mechanics and Technical Physics, 1984, 25, 340-345.	0.5	1
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