Boris I Loukhovitski

List of Publications by Year
in descending order

53	657	516215 16	676716 22
papers	citations	h-index	g-index

57	57	57	331
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Energy Levels and State-Specific Electric Properties. Springer Briefs in Molecular Science, 2022, , 23-56.	0.1	0
2	Polarizability of Electronically Excited States. Springer Briefs in Molecular Science, 2022, , 67-74.	0.1	0
3	Dependences of Potential Energy and Electric Properties of Molecule on Nuclear Displacements. Springer Briefs in Molecular Science, 2022, , 5-22.	0.1	0
4	Toward size-dependent thermodynamics of nanoparticles from quantum chemical calculations of small atomic clusters: a case study of (B₂O₃)_n. Physical Chemistry Chemical Physics, 2022, , .	1.3	1
5	Energy disposal into the vibrational degrees of freedom of bimolecular reaction products: Key factors and simple model. Chemical Physics, 2021, 544, 111098.	0.9	4
6	Molecular Collision Diameters and Electronic Polarizabilities: Inherent Relationship and Fast Evaluation. Journal of Physical Chemistry A, 2021, 125, 5117-5123.	1.1	6
7	Reaction of the N Atom with Electronically Excited O₂ Revisited: A Theoretical Study. Journal of Physical Chemistry A, 2021, 125, 8294-8312.	1.1	2
8	On the Kinetic Mechanism of Ignition of Diborane Mixtures with Air. Combustion, Explosion and Shock Waves, 2020, 56, 249-266.	0.3	5
9	On the Refractive Index of a Gas under High-Thermal-Nonequilibrium Conditions. Journal of Engineering Physics and Thermophysics, 2020, 93, 850-857.	0.2	4
10	Experimental study of high temperature oxidation of dimethyl ether, n-butanol and methane. Combustion and Flame, 2020, 218, 121-133.	2.8	13
11	Small atomic clusters: quantum chemical research of isomeric composition and physical properties. Structural Chemistry, 2019, 30, 2057-2084.	1.0	20
12	Polarizability of electronically excited molecular oxygen: theory and experiment. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 045101.	0.6	14
13	Direct measurements of C₃F₇I dissociation rate constants using a shock tube ARAS technique. International Journal of Chemical Kinetics, 2019, 51, 206-214.	1.0	4
14	Structure and properties of (AlB2)n and (MgB2)n (n = 1, â€¦, 10) clusters. European Physical Journal D, 2019, 73, 1.	0.6	13
15	DFT study of small aluminum and boron hydrides: isomeric composition and physical properties. Structural Chemistry, 2018, 29, 49-68.	1.0	14
16	Small ternary AlnBmHl clusters: DFT analysis of structure and properties. Structural Chemistry, 2018, 29, 1573-1588.	1.0	4
17	Thermodynamic Analysis of Prospects for Using Aluminum- and Boron-Containing Clusters in Combined High-Energy Fuels. Journal of Engineering Physics and Thermophysics, 2018, 91, 766-773.	0.2	9
18	DFT study of small aluminum and boron hydrides: isomeric composition and physical properties. , 2018, 29, 49.		1

#	Article	IF	Citations
19	Quantum chemical study of small Al n B m clusters: Structure and physical properties. Chemical Physics, 2017, 493, 61-76.	0.9	11
20	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.	0.6	22
21	Reaction of H₂ with O₂ in Excited Electronic States: Reaction Pathways and Rate Constants. Journal of Physical Chemistry A, 2017, 121, 9599-9611.	1.1	15
22	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.	0.6	20
23	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.	0.6	20
24	Theoretical study of physical and thermodynamic properties of AlnNm clusters*. European Physical Journal D, 2016, 70, 1.	0.6	11
25	Theoretical study of thermochemical properties of Al_nC_mclusters. Physica Scripta, 2016, 91, 013004.	1.2	11
26	Theoretical Study of the Reactions of Methane and Ethane with Electronically Excited N₂(A³Î£_u⁺). Journal of Physical Chemistry A, 2016, 120, 4349-4359.	1.1	13
27	Physical and Thermodynamic Properties of Al_nC_m Clusters: Quantum-Chemical Study. Journal of Physical Chemistry A, 2015, 119, 1369-1380.	1.1	29
28	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.	3.8	14
29	Physics and chemistry of the influence of excited molecules on combustion enhancement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140341.	1.6	42
30	A modified model of mode approximation for nitrogen plasma based on the state-to-state approach. Plasma Sources Science and Technology, 2015, 24, 055008.	1.3	11
31	Quantum chemical study of small BnCm cluster structures and their physical properties. European Physical Journal D, 2015, 69, 1.	0.6	24
32	Theoretical evaluation of diffusion coefficients of (Al2O3)n clusters in different bath gases. European Physical Journal D, 2014, 68, 1.	0.6	31
33	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.	1.3	11
34	Kinetics of plasmachemical processes in the expanding flow of nitrogen plasma. Physica Scripta, 2013, 88, 058306.	1.2	10
35	Theoretical study of structure and physical properties of (Al₂O₃)_nclusters. Physica Scripta, 2013, 88, 058307.	1.2	20
36	Thermally nonequilibrium effects in shock-induced nitrogen plasma: modelling study. Plasma Sources Science and Technology, 2013, 22, 035013.	1.3	18

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37	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.	1.3	18
38	Application of state-to-state approach in estimation of thermally nonequilibrium reaction rate constants in mode approximation. Chemical Physics, 2012, 398, 73-80.	0.9	29
39	Intensification of shock-induced combustion by electric-discharge-excited oxygen molecules: numerical study. Combustion Theory and Modelling, 2010, 14, 653-679.	1.0	37
40	Modeling of vibrationâ€“electronicâ€“chemistry coupling in the atomicâ€“molecular oxygen system. Chemical Physics, 2009, 360, 18-26.	0.9	21
41	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.	0.3	17
42	Thermally nonequilibrium processes occurring during the ignition of hydrocarbon-air mixtures behind shock waves. Russian Journal of Physical Chemistry B, 2008, 2, 722-731.	0.2	4
43	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.	0.3	20
44	On combustion enhancement mechanisms in the case of electrical-discharge-excited oxygen molecules. Technical Physics, 2007, 52, 1281-1290.	0.2	14
45	<title>Laser-induced excitation of target molecules as an efficient approach to control the combustion and technological chemical processes</title>. , 2006, 6053, 245.		0
46	Mechanisms of the IR laser initiation of combustion in a supersonic H2/O3/O2 flow. Kinetics and Catalysis, 2006, 47, 333-340.	0.3	7
47	Initiation of combustion by laser-induced excitation of molecular vibrations of reactants. Journal of Russian Laser Research, 2006, 27, 533-551.	0.3	5
48	On mechanisms of intensifying combustion due to the simultaneous excitation of vibrational and electronic states of reacting molecules. Doklady Physics, 2005, 50, 252-257.	0.2	6
49	Initiation of Combustion in a Supersonic Hydrogen-Air Mixture Flow by CO2-Laser Radiation. Fluid Dynamics, 2005, 40, 305-314.	0.2	1
50	Activation of Chain Processes in Combustible Mixtures by Laser Excitation of Molecular Vibrations of Reactants. Combustion, Explosion and Shock Waves, 2005, 41, 386-394.	0.3	16
51	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.	0.2	10
52	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.	0.3	5
53	Control of combustion and detonation by means of resonance laser radiation: analysis and potentialities. , 2003, , .		0