Alexander S Sharipov

List of Publications by Year
in descending order

51	848	430442 18	552369 26
papers	citations	h-index	g-index

55	55	55	449
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Syngas Oxidation Mechanism. Combustion, Explosion and Shock Waves, 2010, 46, 491-506.	0.3	52
2	Theoretical analysis of reaction kinetics with singlet oxygen molecules. Physical Chemistry Chemical Physics, 2011, 13, 16424.	1.3	50
3	Numerical analysis of nanoaluminum combustion in steam. Combustion and Flame, 2014, 161, 1659-1667.	2.8	44
4	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
5	Kinetics of Al + H₂O Reaction: Theoretical Study. Journal of Physical Chemistry A, 2011, 115, 4476-4481.	1.1	40
6	Intensification of shock-induced combustion by electric-discharge-excited oxygen molecules: numerical study. Combustion Theory and Modelling, 2010, 14, 653-679.	1.0	37
7	Theoretical evaluation of diffusion coefficients of (Al2O3)n clusters in different bath gases. European Physical Journal D, 2014, 68, 1.	0.6	31
8	Physical and Thermodynamic Properties of Al_nC_m Clusters: Quantum-Chemical Study. Journal of Physical Chemistry A, 2015, 119, 1369-1380.	1.1	29
9	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.	1.1	27
10	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.	1.2	26
11	Quantum chemical study of small BnCm cluster structures and their physical properties. European Physical Journal D, 2015, 69, 1.	0.6	24
12	Evaluation of the reaction rate constants for the gas-phase Al-CH₄â€“air combustion chemistry. Combustion Theory and Modelling, 2012, 16, 842-868.	1.0	23
13	Kinetic mechanism of COâ€“H2 system oxidation promoted by excited singlet oxygen molecules. Combustion and Flame, 2012, 159, 16-29.	2.8	23
14	Reactions of electronically excited molecular nitrogen with H₂and H₂O molecules: theoretical study. Journal Physics D: Applied Physics, 2018, 51, 184003.	1.3	23
15	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
16	Theoretical study of structure and physical properties of (Al₂O₃)_nclusters. Physica Scripta, 2013, 88, 058307.	1.2	20
17	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
18	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

#	Article	IF	Citations
19	Small atomic clusters: quantum chemical research of isomeric composition and physical properties. Structural Chemistry, 2019, 30, 2057-2084.	1.0	20
20	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.	1.2	17
21	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.	1.1	15
22	Analysis of the reaction and quenching channels in a H + O₂(a¹Î”_g) system. Physica Scripta, 2013, 88, 058305.	1.2	15
23	Theoretical Study of the Reactions of Ethanol with Aluminum and Aluminum Oxide. Journal of Physical Chemistry A, 2015, 119, 3897-3904.	1.1	15
24	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
25	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.	2.4	14
26	Enhancement of hydrogen sulfide oxidation via excitation of oxygen molecules to the singlet delta state. Combustion and Flame, 2016, 170, 124-134.	2.8	14
27	DFT study of small aluminum and boron hydrides: isomeric composition and physical properties. Structural Chemistry, 2018, 29, 49-68.	1.0	14
28	Polarizability of electronically excited molecular oxygen: theory and experiment. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 045101.	0.6	14
29	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
30	Interaction of CH4 with Electronically Excited O2: Ab Initio Potential Energy Surfaces and Reaction Kinetics. Plasma Chemistry and Plasma Processing, 2019, 39, 1533-1558.	1.1	13
31	Structure and properties of (AlB2)n and (MgB2)n (n = 1, â€¦, 10) clusters. European Physical Journal D, 2019, 73, 1.	0.6	13
32	Experimental study of high temperature oxidation of dimethyl ether, n-butanol and methane. Combustion and Flame, 2020, 218, 121-133.	2.8	13
33	Intensification of syngas ignition through the excitation of CO molecule vibrations: a numerical study. Journal Physics D: Applied Physics, 2010, 43, 245501.	1.3	12
34	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
35	Theoretical study of physical and thermodynamic properties of AlnNm clusters*. European Physical Journal D, 2016, 70, 1.	0.6	11
36	Theoretical study of thermochemical properties of Al_nC_mclusters. Physica Scripta, 2016, 91, 013004.	1.2	11

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37	Quantum chemical study of small Al n B m clusters: Structure and physical properties. Chemical Physics, 2017, 493, 61-76.	0.9	11
38	Quantum chemical study of the reactions of Al, AlO and AlOH with H2O2. Chemical Physics, 2016, 465-466, 9-16.	0.9	6
39	Molecular Collision Diameters and Electronic Polarizabilities: Inherent Relationship and Fast Evaluation. Journal of Physical Chemistry A, 2021, 125, 5117-5123.	1.1	6
40	Small ternary AlnBmHl clusters: DFT analysis of structure and properties. Structural Chemistry, 2018, 29, 1573-1588.	1.0	4
41	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
42	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
43	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
44	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
45	Interaction of ethane with singlet oxygen: A theoretical study of potential energy surfaces. Journal of Physics: Conference Series, 2021, 1891, 012020.	0.3	1
46	DFT study of small aluminum and boron hydrides: isomeric composition and physical properties. , 2018, 29, 49.		1
47	Ignition of a syngas/air mixture intensified by an electrical discharge in air: Experiment and modelling. AIP Conference Proceedings, 2020, , .	0.3	1
48	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
49	Energy Levels and State-Specific Electric Properties. Springer Briefs in Molecular Science, 2022, , 23-56.	0.1	0
50	Polarizability of Electronically Excited States. Springer Briefs in Molecular Science, 2022, , 67-74.	0.1	0
51	Dependences of Potential Energy and Electric Properties of Molecule on Nuclear Displacements. Springer Briefs in Molecular Science, 2022, , 5-22.	0.1	0