Valeriy N Azyazov

List of Publications by Year
in descending order

64 papers	855 citations	471509 17 h-index	526287 27 g-index
64 all docs	64 docs citations	64 times ranked	547 citing authors

#	Article	IF	Citations
1	The Reaction of <i>o</i>â€Benzyne with Vinylacetylene: An Unexplored Way to Produce Naphthalene. ChemPhysChem, 2022, 23, .	2.1	7
2	Unconventional excited-state dynamics in the concerted benzyl (C7H7) radical self-reaction to anthracene (C14H10). Nature Communications, 2022, 13, 786.	12.8	17
3	Gas-Phase Study of the Elementary Reaction of the D1-Ethynyl Radical (C₂D;) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 Single-Collision Conditions. Journal of Physical Chemistry A, 2022, 126, 1889-1898.	2.5	3
4	Formation of Benzene and Naphthalene through Cyclopentadienyl-Mediated Radicalâ€“Radical Reactions. Journal of Physical Chemistry Letters, 2022, 13, 208-213.	4.6	14
5	Directed Gas Phase Formation of the Elusive Silylgermylidyne Radical (H 3 SiGe, X 2 Aâ€²â€²). ChemPhysChem, 2021, 22, 184-191.	2.1	3
6	A molecular beam and computational study on the barrierless gas phase formation of (iso)quinoline in low temperature extraterrestrial environments. Physical Chemistry Chemical Physics, 2021, 23, 18495-18505.	2.8	5
7	Gas-Phase Formation of C₅H₆ Isomers via the Crossed Molecular Beam Reaction of the Methylidyne Radical (CH; X²Î) with 1,2-Butadiene (CH₃CHCCH₂; X¹Aâ€²). Journal of Physical Chemistry A, 2021, 125, 126-138.	2.5	6
8	Mechanism and kinetics of the oxidation of 1,3-butadien-1-yl (<i>n</i>-C₄H₅): a theoretical study. Physical Chemistry Chemical Physics, 2021, 23, 9198-9210.	2.8	2
9	On the Synthesis of the Astronomically Elusive 1-Ethynyl-3-Silacyclopropenylidene (c-SiC₄H₂) Molecule in Circumstellar Envelopes of Carbon-rich Asymptotic Giant Branch Stars and Its Potential Role in the Formation of the Silicon Tetracarbide Chain (SiC₄). Astrophysical Journal Letters, 2021, 908, L40.	8.3	7
10	Theoretical Study of the Phenoxy Radical Recombination with the O(³P) Atom, Phenyl plus Molecular Oxygen Revisited. Journal of Physical Chemistry A, 2021, 125, 3965-3977.	2.5	11
11	Gas-phase synthesis of benzene via the propargyl radical self-reaction. Science Advances, 2021, 7, .	10.3	34
12	Combined Crossed Molecular Beams and Ab Initio Study of the Bimolecular Reaction of Ground State Atomic Silicon (Si; 3 P) with Germane (GeH 4 ; X 1 A 1). ChemPhysChem, 2021, 22, 1497-1504.	2.1	1
13	Directed Gas-Phase Formation of Aminosilylene (HSiNH₂;X^{1}Aâ€²): The Simplest Silicon Analogue of an Aminocarbene, under Single-Collision Conditions. Journal of the American Chemical Society, 2021, 143, 14227-14234.	13.7	6
14	Gas-phase synthesis of corannulene â€“ a molecular building block of fullerenes. Physical Chemistry Chemical Physics, 2021, 23, 5740-5749.	2.8	10
15	Theoretical Study of the Reaction of the Methylidyne Radical (CH; X²Î) with 1-Butyne (CH₃CH₂CCH; X¹Aâ€²). Journal of Physical Chemistry A, 2021, 125, 9536-9547.	2.5	2
16	Ozone destruction due to the recombination of oxygen atoms. Journal of Chemical Physics, 2021, 155, 164307.	3.0	4
17	Gas-phase Synthesis of Silaformaldehyde (H₂SiO) and Hydroxysilylene (HSiOH) in Outflows of Oxygen-rich Asymptotic Giant Branch Stars. Astrophysical Journal Letters, 2021, 921, L7.	8.3	0
18	A chemical dynamics study of the reaction of the methylidyne radical (CH, X²Î) with dimethylacetylene (CH₃CCCH₃, X¹A_{1g}). Physical Chemistry Chemical Physics, 2021, 24, 578-593.	2.8	12

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19	Conversion of acenaphthalene to phenalene via methylation: A theoretical study. Combustion and Flame, 2020, 213, 302-313.	5.2	24
20	A Unified Mechanism on the Formation of Acenes, Helicenes, and Phenacenes in the Gas Phase. Angewandte Chemie - International Edition, 2020, 59, 4051-4058.	13.8	18
21	Gas phase formation of cyclopentanaphthalene (benzindene) isomers via reactions of 5- and 6-indenyl radicals with vinylacetylene. Physical Chemistry Chemical Physics, 2020, 22, 22493-22500.	2.8	13
22	Gasâ€Phase Synthesis of 3â€Vinylcyclopropene via the Crossed Beam Reaction of the Methylidyne Radical (CH; X 2 Î) with 1,3â€Butadiene (CH 2 CHCHCH 2 ; X 1 A g). ChemPhysChem, 2020, 21, 1295-1309.	2.1	7
23	Directed Gas Phase Formation of Silene (H 2 SiCH 2). Chemistry - A European Journal, 2020, 26, 13584-13589.	3.3	4
24	A Unified Mechanism on the Formation of Acenes, Helicenes, and Phenacenes in the Gas Phase. Angewandte Chemie, 2020, 132, 4080-4087.	2.0	5
25	Gas phase formation of phenalene via 10Ï€-aromatic, resonantly stabilized free radical intermediates. Physical Chemistry Chemical Physics, 2020, 22, 15381-15388.	2.8	15
26	Gas Phase Formation of Methylgermylene (HGeCH3). ChemPhysChem, 2020, 21, 1898-1904.	2.1	4
27	A Freeâ€Radical Prompted Barrierless Gasâ€Phase Synthesis of Pentacene. Angewandte Chemie, 2020, 132, 11430-11434.	2.0	5
28	A Freeâ€Radical Prompted Barrierless Gasâ€Phase Synthesis of Pentacene. Angewandte Chemie - International Edition, 2020, 59, 11334-11338.	13.8	16
29	How to add a five-membered ring to polycyclic aromatic hydrocarbons (PAHs) â€" molecular mass growth of the 2-naphthyl radical (C₁₀H₇) to benzindenes (C₁₃H₁₀) as a case study. Physical Chemistry Chemical Physics, 2019, 21, 16737-16750.	2.8	26
30	Gasâ€Phase Synthesis of Triphenylene (C 18 H 12). ChemPhysChem, 2019, 20, 791-797.	2.1	13
31	Reactivity of the Indenyl Radical (C₉H₇) with Acetylene (C₂H₂) and Vinylacetylene (C₄H₄). ChemPhysChem, 2019, 20, 1437-1447.	2.1	21
32	Gas phase synthesis of [4]-helicene. Nature Communications, 2019, 10, 1510.	12.8	27
33	Computational investigation of energy transfer and line broadening for Ar* + He collisions. Journal of Chemical Physics, 2019, 151, 224306.	3.0	6
34	Oxidation of cyclopentadienyl radical with molecular oxygen: A theoretical study. Combustion and Flame, 2018, 191, 309-319.	5.2	22
35	VUV Photoionization Study of the Formation of the Simplest Polycyclic Aromatic Hydrocarbon: Naphthalene (C₁₀H₈). Journal of Physical Chemistry Letters, 2018, 9, 2620-2626.	4.6	57
36	Combined Experimental and Computational Investigation of the Elementary Reaction of Ground State Atomic Carbon (C; ³P_{<i>j</i>}) with Pyridine (C₅H₅N;) Tj ETQq0 0 0 rgBT /Overlock Chemistry A, 2018, 122, 3128-3139.	2.5	7

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37	Detailed, sterically-resolved modeling of soot oxidation: Role of O atoms, interplay with particle nanostructure, and emergence of inner particle burning. Combustion and Flame, 2018, 188, 284-306.	5.2	81
38	Rate constants for collision-induced emission of O2(a1Î”g) with He, Ne, Ar, Kr, N2, CO2 and SF6 as collisional partners. Physical Chemistry Chemical Physics, 2018, 20, 29677-29683.	2.8	3
39	Low-temperature formation of polycyclic aromatic hydrocarbons in Titanâ€™s atmosphere. Nature Astronomy, 2018, 2, 973-979.	10.1	72
40	HACA's Heritage: A Freeâ€Radical Pathway to Phenanthrene in Circumstellar Envelopes of Asymptotic Giant Branch Stars. Angewandte Chemie - International Edition, 2017, 56, 4515-4519.	13.8	48
41	HACA's Heritage: A Freeâ€Radical Pathway to Phenanthrene in Circumstellar Envelopes of Asymptotic Giant Branch Stars. Angewandte Chemie, 2017, 129, 4586-4590.	2.0	20
42	Kinetics of the CH₃ + C₅H₅ Reaction: A Theoretical Study. Journal of Physical Chemistry A, 2017, 121, 9191-9200.	2.5	27
43	Product channels of the reactions of Rb(62P) with H2, CH4 and C2H6. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 196, 46-52.	2.3	2
44	Deactivation and reaction of excited states of Rb in collisions with H2, CH4and C2H6. , 2016, , .		1
45	Oxygen assisted iodine atoms production in an RF discharge. , 2016, , .		0
46	Optical pumping of the oxygen-iodine laser medium. Proceedings of SPIE, 2016, , .	0.8	0
47	Gas Flow Visualization Using Laser-induced Fluorescence. Procedia Engineering, 2015, 106, 92-96.	1.2	1
48	Pressure broadening of Ar and Kr (n+1)s[3/2]2â†’(n+1)p[5/2]3 transition in the parent gases and in He. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 164, 1-7.	2.3	35
49	Features of power extraction in EOIL. , 2015, , .		0
50	Oxygen assisted iodine atoms production in an RF discharge for a cw oxygen-iodine laser. , 2015, , .		0
51	Analysis of CW Oxygen-Iodine Laser Performance Using Similarity Criteria. IEEE Journal of Quantum Electronics, 2013, 49, 739-746.	1.9	6
52	Modeling of cw OIL energy performance based on similarity criteria. Proceedings of SPIE, 2013, , .	0.8	1
53	I2 dissociation by O2(a1Î”) generated from the reaction O(1D)+N2O. Chemical Physics Letters, 2011, 502, 150-153.	2.6	4
54	O2(a1Î”) quenching in the O/O2/O3 system. Chemical Physics Letters, 2009, 482, 56-61.	2.6	31

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55	Properties of a DC glow discharge iodine atom generator. Proceedings of SPIE, 2009, , .	0.8	3
56	Properties of O2(Î”1)â€“I(P21/2) laser medium with a dc glow discharge iodine atom generator. Journal of Applied Physics, 2008, 104, 123111.	2.5	14
57	Formation of I2(B3Î0) in the presence of O2(a1Î”). Journal of Applied Physics, 2007, 102, 123108.	2.5	7
58	Kinetics of O2(a1Î”g) and I(2P1/2) in the Photochemistry of N2O/I2Mixturesâ€. Journal of Physical Chemistry A, 2007, 111, 6592-6599.	2.5	18
59	Quenching of I(2P1/2) by NO2, N2O4, and N2O. Journal of Physical Chemistry A, 2007, 111, 10062-10067.	2.5	4
60	Quenching of I(2P1/2) by O3 and O(3P). Journal of Physical Chemistry A, 2007, 111, 3010-3015.	2.5	16
61	I 2 (B) formation in the oxygen-iodine laser medium. , 2007, , .		0
62	Oxygen-iodine active medium with external production of iodine in a DC glow discharge. , 2006, 6346, 164.		1
63	Chemical kinetics of discharge-driven oxygen-iodine lasers. , 2006, 6346, 156.		1
64	Role of O2(b) and I2 (A',A) in Chemical Oxygen-Iodine Laser Dissociation Process. AIAA Journal, 2006, 44, 1593-1600.	2.6	25