Akira Miyoshi

List of Publications by Year in descending order

76 papers	2,496 citations	186254 28 h-index	206102 48 g-index
76 all docs	76 docs citations	76 times ranked	1972 citing authors

#	Article	IF	Citations
1	Systematic Computational Study on the Unimolecular Reactions of Alkylperoxy (RO₂), Hydroperoxyalkyl (QOOH), and Hydroperoxyalkylperoxy (O₂QOOH) Radicals. Journal of Physical Chemistry A, 2011, 115, 3301-3325.	2.5	196
2	OH radical- initiated photooxidation of isoprene: An estimate of global CO production. Journal of Geophysical Research, 1994, 99, 18779.	3.3	141
3	Role of Phenyl Radicals in the Growth of Polycyclic Aromatic Hydrocarbons. Journal of Physical Chemistry A, 2008, 112, 2362-2369.	2.5	129
4	High-Temperature Reactions of OH Radicals with Benzene and Toluene. Journal of Physical Chemistry A, 2006, 110, 5081-5090.	2.5	118
5	Thermal Decomposition and Isomerization Processes of Alkyl Radicals. Journal of Physical Chemistry A, 1999, 103, 2723-2733.	2.5	99
6	Role of methyl radicals in the growth of PAHs. Journal of the American Society for Mass Spectrometry, 2010, 21, 534-544.	2.8	98
7	A kinetic modeling study on the oxidation of primary reference fuelâ€“toluene mixtures including cross reactions between aromatics and aliphatics. Proceedings of the Combustion Institute, 2009, 32, 411-418.	3.9	95
8	Modeling of two- and three-ring aromatics formation in the pyrolysis of toluene. Proceedings of the Combustion Institute, 2013, 34, 269-277.	3.9	90
9	Development of pore size-controlled silica membranes for gas separation by chemical vapor deposition. Journal of Membrane Science, 2008, 315, 93-99.	8.2	86
10	Molecular size dependent falloff rate constants for the recombination reactions of alkyl radicals with O₂ and implications for simplified kinetics of alkylperoxy radicals. International Journal of Chemical Kinetics, 2012, 44, 59-74.	1.6	78
11	Rate coefficients of H-atom abstraction from ethers and isomerization of alkoxyalkylperoxy radicals. Physical Chemistry Chemical Physics, 2007, 9, 5133.	2.8	76
12	Detection and reactions of the HOCO radical in gas phase. Journal of Chemical Physics, 1994, 100, 3532-3539.	3.0	75
13	In Situ Direct Sampling Mass Spectrometric Study on Formation of Polycyclic Aromatic Hydrocarbons in Toluene Pyrolysis. Journal of Physical Chemistry A, 2007, 111, 8308-8324.	2.5	72
14	Rates of reaction of hydroxyalkyl radicals with molecular oxygen. The Journal of Physical Chemistry, 1990, 94, 3016-3019.	2.9	66
15	Kinetic Studies on the Pyrolysis of H2S. The Journal of Physical Chemistry, 1996, 100, 2136-2140.	2.9	64
16	Computational study on the recombination reaction between benzyl and propargyl radicals. International Journal of Chemical Kinetics, 2012, 44, 206-218.	1.6	63
17	Experimental study on self-acceleration in expanding spherical hydrogen-air flames. International Journal of Hydrogen Energy, 2018, 43, 12556-12564.	7.1	57
18	Reactions of Atomic Oxygen (3P) with Selected Alkanes. The Journal of Physical Chemistry, 1994, 98, 11452-11458.	2.9	54

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19	Computational studies on the reactions of 3â€butenyl and 3â€butenylperoxy radicals. International Journal of Chemical Kinetics, 2010, 42, 273-288.	1.6	49
20	Kinetics of the silyl + oxygen reaction studied by time-resolved mass spectrometry. The Journal of Physical Chemistry, 1991, 95, 9869-9873.	2.9	42
21	Kinetics and Mechanisms of the Allyl + Allyl and Allyl + Propargyl Recombination Reactions. Journal of Physical Chemistry A, 2011, 115, 7610-7624.	2.5	39
22	Chemical Kinetic Mechanism for High Temperature Oxidation of Butane Isomers. Energy & Fuels, 2007, 21, 130-135.	5.1	35
23	Investigation on the Insertion Channel in the S(3P) + H2Reaction. Journal of Physical Chemistry A, 1998, 102, 3556-3559.	2.5	33
24	Reactions of o-benzyne with propargyl and benzyl radicals: potential sources of polycyclic aromatic hydrocarbons in combustion. Physical Chemistry Chemical Physics, 2012, 14, 9722.	2.8	32
25	Reaction rates of atomic oxygen with straight chain alkanes and fluoromethanes at high temperatures. Chemical Physics Letters, 1993, 204, 241-247.	2.6	30
26	Kinetic Study on Reactions of 1- and 2-Methylvinoxy Radicals with O2. Journal of Physical Chemistry A, 2001, 105, 378-382.	2.5	30
27	Modeling of the Oxidation of Primary Reference Fuel in the Presence of Oxygenated Octane Improvers: Ethyl Tert-Butyl Ether and Ethanol. Energy & Fuels, 2007, 21, 3233-3239.	5.1	30
28	Reactions of hydroxyethyl radicals with oxygen and nitric oxide. Chemical Physics Letters, 1989, 160, 291-294.	2.6	29
29	Studies on the reaction of acetaldehyde and acetyl radicals with atomic hydrogen. The Journal of Physical Chemistry, 1990, 94, 3253-3255.	2.9	25
30	Studies on the Reactions of Atomic Sulfur (3P) with H2, D2, CH4, C2H6, C3H8,n-C4H10, andi-C4H10. The Journal of Physical Chemistry, 1996, 100, 17202-17206.	2.9	23
31	Effects of Toluene Addition to Primary Reference Fuel at High Temperature. , 0, , .		22
32	Direct investigations on the thermal unimolecular isomerization reaction of 1-pentyl radicals. Proceedings of the Combustion Institute, 2002, 29, 1285-1293.	3.9	21
33	Two-Channel Thermal Unimolecular Decomposition of Alkyl Iodides. Journal of Physical Chemistry A, 1999, 103, 46-53.	2.5	20
34	Decomposition of Ethanol and Dimethyl Ether during Chemical Vapor Deposition Synthesis of Single-Walled Carbon Nanotubes. Japanese Journal of Applied Physics, 2011, 50, 065101.	1.5	20
35	Product branching fractions in the reactions of NH(aâ€‰1Î”) and NH(Xâ€‰3Î£â^) with NO. Journal of Chemical Physics, 1994, 101, 9582-9588.	3.0	18
36	Kinetics of the self-reactions of benzyl and o-xylyl radicals studied by cavity ring-down spectroscopy. Chemical Physics Letters, 2012, 521, 26-30.	2.6	18

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37	Site-Specific Branching Fractions for the O(3P) and OH + C3H8 Reactions. The Journal of Physical Chemistry, 1996, 100, 4893-4899.	2.9	17
38	Reaction of acetaldehyde and acetyl radical with atomic and molecular oxygen. The Journal of Physical Chemistry, 1989, 93, 5813-5818.	2.9	16
39	Rate constant and mechanism of the SiH3+SiH3 reaction. Chemical Physics Letters, 1991, 184, 442-447.	2.6	16
40	Direct Study on the Unimolecular Decomposition of Methoxy Radicals: The Role of the Tunneling Effect. Bulletin of the Chemical Society of Japan, 2000, 73, 53-60.	3.2	16
41	Determination of the Equilibrium Constant and Thermodynamic Parameters for the Reaction of Pentadienyl Radicals with O2. Journal of Physical Chemistry A, 2001, 105, 1277-1282.	2.5	16
42	Photolysis of Disilane at 193 nm. Journal of Physical Chemistry A, 1999, 103, 322-329.	2.5	15
43	Mechanism of the Reactions of Butenes with O(3P):Â The Yields of CH3and C2H5. Journal of Physical Chemistry A, 2004, 108, 1409-1416.	2.5	15
44	Kinetics of autoignition: a simple intuitive interpretation and its relation to the Livengoodâ€“Wu integral. Physical Chemistry Chemical Physics, 2018, 20, 10762-10769.	2.8	15
45	Product branching fractions for the reaction of O(3P) with ethene. Physical Chemistry Chemical Physics, 2009, 11, 7318.	2.8	14
46	Kinetic study on gas phase zinc reduction of silicon tetrachloride. Chemical Engineering Journal, 2011, 168, 889-895.	12.7	14
47	Experimental and Theoretical Study on the Thermal Decomposition of C₃H₆ (Propene). Journal of Physical Chemistry A, 2015, 119, 1229-1237.	2.5	13
48	Reactions of Methyl- and Ethylperoxy Radicals with NO Studied by Time-Resolved Negative Ionization Mass Spectrometry. Journal of Physical Chemistry A, 2004, 108, 10458-10463.	2.5	11
49	Formation of contact ion-pair and dissociated ion-radicals by electron transfer from excited amine to oxygen molecules. Chemical Physics Letters, 1972, 15, 223-225.	2.6	10
50	Deuterium kinetic isotope effects on the gas-phase reactions of C2H with H2(D2) and CH4(CD4). Physical Chemistry Chemical Physics, 2011, 13, 4022.	2.8	10
51	Yield of Formyl Radical from the Vinyl + O₂ Reaction. International Journal of Chemical Kinetics, 2014, 46, 260-274.	1.6	10
52	Development of Gasoline Combustion Reaction Model. , 0, , .		9
53	Burning velocities and kinetics of H2/NF3/N2, CH4/NF3/N2, and C3H8/NF3/N2 flames. Combustion and Flame, 2014, 161, 1425-1431.	5.2	9
54	Laser-induced fluorescence of radicals produced in reactions of halogenated ethylenes with atomic oxygen. Journal of Chemical Physics, 1997, 107, 6998-7000.	3.0	8

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55	Mechanism and Kinetic Isotope Effect of the Reaction of C2(X1Î£g+) Radicals with H2 and D2. Journal of Physical Chemistry A, 2009, 113, 8963-8970.	2.5	8
56	Chemical Kinetic Analysis on the Effect of the Occurrence of Cool Flame on SI Knock. International Journal of Automotive Engineering, 2017, 8, 130-136.	0.5	8
57	OS3-1 KUCRS - Detailed Kinetic Mechanism Generator for Versatile Fuel Components and Mixtures(OS3) Tj ETQq1 1 0.784314 rgBT /Ov of the International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines. 2012. 2012.8. 116-121.	0.1	8
58	Development of a technique for high-temperature chemical kinetics: Shock tube/pulsed laser-induced fluorescence imaging method. Review of Scientific Instruments, 2005, 76, 064103.	1.3	7
59	Laser-induced fluorescence and pure rotational spectroscopy of the CH2CHS (vinylthio) radical. Journal of Chemical Physics, 2007, 126, 044307.	3.0	7
60	Reaction of NH(a1.DELTA.) with SiH4: Comparison with CH4 and C3H8. The Journal of Physical Chemistry, 1995, 99, 1466-1469.	2.9	6
61	Kinetics and mechanism of the reaction of S(3P) with O2. Proceedings of the Combustion Institute, 1996, 26, 535-541.	0.3	6
62	Reaction rates of O(3P) atom with fluoroethanes at 1000â€“1400 K. Chemical Physics Letters, 2001, 336, 242-247.	2.6	6
63	Rate Constants for the Reactions of a Series of Alkylperoxy Radicals with NO. Journal of Physical Chemistry A, 2005, 109, 4095-4101.	2.5	5
64	Rate Constants and Kinetic Isotope Effects on the Reaction of C2(X1Î£g+) with CH4 and CD4. Journal of Physical Chemistry A, 2010, 114, 4580-4585.	2.5	5
65	Improving the synthetic efficiency of single-wall carbon nanotube forests using a gas-analysis-designed mixed carbon feedstock. Carbon, 2020, 170, 59-65.	10.3	4
66	Development of Surface Reaction Mechanisms of CO/O2 on Pt and Rh for Three-Way Catalyst based on Gas Phase and Surface Species Analyses. Combustion Science and Technology, 2020, , 1-21.	2.3	4
67	Chain Reaction Mechanism in Hydrogen/Fluorine Combustion. Journal of Physical Chemistry A, 2013, 117, 14042-14047.	2.5	3
68	SI Combustion Characteristics of Cyclopentane - Detailed Kinetic Mechanism. , 0, , .		3
69	Gas-phase spectroscopy of the 2â€‰Î£3â^'â^'XÌƒâ€‰Î£3â^' electronic transition of CCS. Journal of Chemical Physics, 2009, 130, 014302.	3.0	2
70	Electronic spectra of the jet-cooled 1-methylvinylthio radical. Journal of Chemical Physics, 2012, 136, 184311.	3.0	2
71	Development of Detailed Surface Reaction Mechanism of C2H4/C3H6 Oxidation on Pt/Al2O3 Monolith Catalyst Based on Gas Phase and Surface Species Analyses. Combustion Science and Technology, 2020, , 1-23.	2.3	2
72	Measurements and simulations of ignition delay times and laminar flame speeds of nonane isomers. Combustion and Flame, 2021, 227, 283-295.	5.2	2

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73	Deflagration-to-detonation transition in laser-ignited explosive gas contained in a smooth-wall tube. Combustion and Flame, 2020, 219, 275-282.	5.2	1
74	Classification of the Reactivity of Alkylperoxy Radicals by Using a Steady-State Analysis. , 2015, , .		0
75	Studies on the Reactions of Atomic Oxygen(3 P) with C2-C6 Alkanes at High Temperatures: Examination of the Transition State Theory. , 1995, , 131-136.		0
76	Reduced Chemical Kinetic Mechanism for the Prediction of Ignition Delay Time and Laminar Flame Velocity of Natural Gas Combustion. The Proceedings of the International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines, 2017, 2017.9, A306.	0.1	0