Akira Miyoshi

List of Publications by Citations

75 papers	2,123 citations	26 h-index	44 g-index
76 ext. papers	2,310 ext. citations	3.6 avg, IF	5.11 L-index

#	Paper	IF	Citations
75	Systematic computational study on the unimolecular reactions of alkylperoxy (RO2), hydroperoxyalkyl (QOOH), and hydroperoxyalkylperoxy (O2QOOH) radicals. *Journal of Physical Chemistry A*, **2011**, 115, 3301-25	2.8	158
74	OH radical- initiated photooxidation of isoprene: An estimate of global CO production. *Journal of Geophysical Research*, **1994**, 99, 18779		125
73	High-temperature reactions of OH radicals with benzene and toluene. *Journal of Physical Chemistry A*, **2006**, 110, 5081-90	2.8	106
72	Role of phenyl radicals in the growth of polycyclic aromatic hydrocarbons. *Journal of Physical Chemistry A*, **2008**, 112, 2362-9	2.8	96
71	Thermal Decomposition and Isomerization Processes of Alkyl Radicals. *Journal of Physical Chemistry A*, **1999**, 103, 2723-2733	2.8	94
70	A kinetic modeling study on the oxidation of primary reference fuel mixtures including cross reactions between aromatics and aliphatics. *Proceedings of the Combustion Institute*, **2009**, 32, 411-418	5.9	82
69	Role of methyl radicals in the growth of PAHs. *Journal of the American Society for Mass Spectrometry*, **2010**, 21, 534-44	3.5	79
68	Development of pore size-controlled silica membranes for gas separation by chemical vapor deposition. *Journal of Membrane Science*, **2008**, 315, 93-99	9.6	70
67	Detection and reactions of the HOCO radical in gas phase. *Journal of Chemical Physics*, **1994**, 100, 3532-3539		70
66	Rate coefficients of H-atom abstraction from ethers and isomerization of alkoxyalkylperoxy radicals. *Physical Chemistry Chemical Physics*, **2007**, 9, 5133-42	3.6	68
65	Modeling of two- and three-ring aromatics formation in the pyrolysis of toluene. *Proceedings of the Combustion Institute*, **2013**, 34, 269-277	5.9	66
64	In situ direct sampling mass spectrometric study on formation of polycyclic aromatic hydrocarbons in toluene pyrolysis. *Journal of Physical Chemistry A*, **2007**, 111, 8308-24	2.8	66
63	Kinetic Studies on the Pyrolysis of H2S. *The Journal of Physical Chemistry*, **1996**, 100, 2136-2140		63
62	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	1.4	62
61	Rates of reaction of hydroxyalkyl radicals with molecular oxygen. *The Journal of Physical Chemistry*, **1990**, 94, 3016-3019		60
60	Reactions of Atomic Oxygen (3P) with Selected Alkanes. *The Journal of Physical Chemistry*, **1994**, 98, 11452-11458		58
59	Computational study on the recombination reaction between benzyl and propargyl radicals. *International Journal of Chemical Kinetics*, **2012**, 44, 206-218	1.4	48

58	Computational studies on the reactions of 3-butenyl and 3-butenylperoxy radicals. *International Journal of Chemical Kinetics*, **2010**, 42, 273-288	1.4	43
57	Kinetics of the silyl + oxygen reaction studied by time-resolved mass spectrometry. *The Journal of Physical Chemistry*, **1991**, 95, 9869-9873		37
56	Chemical Kinetic Mechanism for High Temperature Oxidation of Butane Isomers. *Energy & Fuels*, **2007**, 21, 130-135	4.1	32
55	Investigation on the Insertion Channel in the S(3P) + H2 Reaction. *Journal of Physical Chemistry A*, **1998**, 102, 3556-3559	2.8	32
54	Experimental study on self-acceleration in expanding spherical hydrogen-air flames. *International Journal of Hydrogen Energy*, **2018**, 43, 12556-12564	6.7	31
53	Kinetics and mechanisms of the allyl + allyl and allyl + propargyl recombination reactions. *Journal of Physical Chemistry A*, **2011**, 115, 7610-24	2.8	31
52	Kinetic Study on Reactions of 1- and 2-Methylvinoxy Radicals with O2. *Journal of Physical Chemistry A*, **2001**, 105, 378-382	2.8	29
51	Reaction rates of atomic oxygen with straight chain alkanes and fluoromethanes at high temperatures. *Chemical Physics Letters*, **1993**, 204, 241-247	2.5	29
50	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	4.1	28
49	Studies on the reaction of acetaldehyde and acetyl radicals with atomic hydrogen. *The Journal of Physical Chemistry*, **1990**, 94, 3253-3255		24
48	Studies on the Reactions of Atomic Sulfur (3P) with H2, D2, CH4, C2H6, C3H8, n-C4H10, and i-C4H10. *The Journal of Physical Chemistry*, **1996**, 100, 17202-17206		23
47	Reactions of hydroxyethyl radicals with oxygen and nitric oxide. *Chemical Physics Letters*, **1989**, 160, 291-294	2.5	23
46	Reactions of o-benzyne with propargyl and benzyl radicals: potential sources of polycyclic aromatic hydrocarbons in combustion. *Physical Chemistry Chemical Physics*, **2012**, 14, 9722-8	3.6	22
45	Effects of Toluene Addition to Primary Reference Fuel at High Temperature **2007**,		22
44	Direct investigations on the thermal unimolecular isomerization reaction of 1-pentyl radicals. *Proceedings of the Combustion Institute*, **2002**, 29, 1285-1293	5.9	20
43	Decomposition of Ethanol and Dimethyl Ether during Chemical Vapor Deposition Synthesis of Single-Walled Carbon Nanotubes. *Japanese Journal of Applied Physics*, **2011**, 50, 065101	1.4	18
42	Two-Channel Thermal Unimolecular Decomposition of Alkyl Iodides. *Journal of Physical Chemistry A*, **1999**, 103, 46-53	2.8	18
41	Site-Specific Branching Fractions for the O(3P) and OH + C3H8 Reactions. *The Journal of Physical Chemistry*, **1996**, 100, 4893-4899		17

40	Product branching fractions in the reactions of NH(a 1Δ)and NH(X 3Σ−)with NO. *Journal of Chemical Physics*, **1994**, 101, 9582-9588	3.9	17
39	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	5.1	15
38	Photolysis of Disilane at 193 nm. *Journal of Physical Chemistry A*, **1999**, 103, 322-329	2.8	15
37	Reaction of acetaldehyde and acetyl radical with atomic and molecular oxygen. *The Journal of Physical Chemistry*, **1989**, 93, 5813-5818		15
36	Product branching fractions for the reaction of O((3)P) with ethene. *Physical Chemistry Chemical Physics*, **2009**, 11, 7318-23	3.6	14
35	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	2.8	14
34	Rate constant and mechanism of the SiH3+SiH3 reaction. *Chemical Physics Letters*, **1991**, 184, 442-447	2.5	14
33	Kinetic study on gas phase zinc reduction of silicon tetrachloride. *Chemical Engineering Journal*, **2011**, 168, 889-895	14.7	13
32	Mechanism of the Reactions of Butenes with O(3P):The Yields of CH3and C2H5. *Journal of Physical Chemistry A*, **2004**, 108, 1409-1416	2.8	12
31	Kinetics of autoignition: a simple intuitive interpretation and its relation to the Livengood-Wu integral. *Physical Chemistry Chemical Physics*, **2018**, 20, 10762-10769	3.6	11
30	Experimental and theoretical study on the thermal decomposition of C3H6 (propene). *Journal of Physical Chemistry A*, **2015**, 119, 1229-37	2.8	11
29	Kinetics of the self-reactions of benzyl and o-xylyl radicals studied by cavity ring-down spectroscopy. *Chemical Physics Letters*, **2012**, 521, 26-30	2.5	10
28	Yield of Formyl Radical from the Vinyl + O2 Reaction. *International Journal of Chemical Kinetics*, **2014**, 46, 260-274	1.4	9
27	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	2.8	9
26	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	2.5	9
25	Deuterium kinetic isotope effects on the gas-phase reactions of C2H with H2(D2) and CH4(CD4). *Physical Chemistry Chemical Physics*, **2011**, 13, 4022-31	3.6	8
24	Mechanism and kinetic isotope effect of the reaction of C2(X1Sigma(g)+) radicals with H2 and D2. *Journal of Physical Chemistry A*, **2009**, 113, 8963-70	2.8	8
23	Laser-induced fluorescence of radicals produced in reactions of halogenated ethylenes with atomic oxygen. *Journal of Chemical Physics*, **1997**, 107, 6998-7000	3.9	8

22	Burning velocities and kinetics of H2/NF3/N2, CH4/NF3/N2, and C3H8/NF3/N2 flames. *Combustion and Flame*, **2014**, 161, 1425-1431	5.3	7
21	Development of a technique for high-temperature chemical kinetics: Shock tube/pulsed laser-induced fluorescence imaging method. *Review of Scientific Instruments*, **2005**, 76, 064103	1.7	7
20	Laser-induced fluorescence and pure rotational spectroscopy of the CH2CHS (vinylthio) radical. *Journal of Chemical Physics*, **2007**, 126, 044307	3.9	6
19	Reaction rates of O(3P) atom with fluoroethanes at 1000□1400 K. *Chemical Physics Letters*, **2001**, 336, 242-247	2.5	6
18	Reaction of NH(a1.DELTA.) with SiH4: Comparison with CH4 and C3H8. *The Journal of Physical Chemistry*, **1995**, 99, 1466-1469		6
17	Kinetics and mechanism of the reaction of S(3P) with O2. *Proceedings of the Combustion Institute*, **1996**, 26, 535-541		6
16	Development of Gasoline Combustion Reaction Model **2013**,		5
15	Rate constants and kinetic isotope effects on the reaction of C2(X(1)Sigma(g)+) with CH4 and CD4. *Journal of Physical Chemistry A*, **2010**, 114, 4580-5	2.8	5
14	Rate constants for the reactions of a series of alkylperoxy radicals with NO. *Journal of Physical Chemistry A*, **2005**, 109, 4095-101	2.8	4
13	Chemical Kinetic Analysis on the Effect of the Occurrence of Cool Flame on SI Knock. *International Journal of Automotive Engineering*, **2017**, 8, 130-136	0.3	3
12	OS3-1 KUCRS - Detailed Kinetic Mechanism Generator for Versatile Fuel Components and Mixtures(OS3 Application of chemical kinetics to combustion modeling,Organized Session Papers). *The Proceedings of the International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines*, **2012**, 2012.8, 116-121		3
11	Improving the synthetic efficiency of single-wall carbon nanotube forests using a gas-analysis-designed mixed carbon feedstock. *Carbon*, **2020**, 170, 59-65	10.4	3
10	Chain reaction mechanism in hydrogen/fluorine combustion. *Journal of Physical Chemistry A*, **2013**, 117, 14042-7	2.8	2
9	Gas-phase spectroscopy of the 2 3Sigma(-)-X 3Sigma- electronic transition of CCS. *Journal of Chemical Physics*, **2009**, 130, 014302	3.9	2
8	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	1.5	1
7	Electronic spectra of the jet-cooled 1-methylvinylthio radical. *Journal of Chemical Physics*, **2012**, 136, 184311	3.9	1
6	SI Combustion Characteristics of Cyclopentane - Detailed Kinetic Mechanism		1
5	Measurements and simulations of ignition delay times and laminar flame speeds of nonane isomers. *Combustion and Flame*, **2021**, 227, 283-295	5.3	1

4	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	1.5	0
3	Studies on the Reactions of Atomic Oxygen(3P) with C2-C6 Alkanes at High Temperatures: Examination of the Transition State Theory **1995**, 131-136		
2	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		
1	Deflagration-to-detonation transition in laser-ignited explosive gas contained in a smooth-wall tube. *Combustion and Flame*, **2020**, 219, 275-282	5.3	