Zhandong Wang

List of Publications by Year
in descending order

81 papers	3,401 citations	94269 37 h-index	149479 56 g-index
82 all docs	82 docs citations	82 times ranked	1730 citing authors

#	Article	IF	Citations
1	Experimental and modeling investigation of the low-temperature oxidation of n-heptane. Combustion and Flame, 2012, 159, 3455-3471.	2.8	165
2	Experimental and kinetic modeling study on methylcyclohexane pyrolysis and combustion. Combustion and Flame, 2014, 161, 84-100.	2.8	126
3	Experimental and Kinetic Modeling Study of n-Butanol Pyrolysis and Combustion. Energy & Fuels, 2012, 26, 5550-5568.	2.5	123
4	Experimental and kinetic modeling study of the low- and intermediate-temperature oxidation of dimethyl ether. Combustion and Flame, 2015, 162, 1113-1125.	2.8	120
5	Exploring hydroperoxides in combustion: History, recent advances and perspectives. Progress in Energy and Combustion Science, 2019, 73, 132-181.	15.8	119
6	Unraveling the structure and chemical mechanisms of highly oxygenated intermediates in oxidation of organic compounds. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13102-13107.	3.3	117
7	Determination of absolute photoionization crossâ€sections of aromatics and aromatic derivatives. Rapid Communications in Mass Spectrometry, 2009, 23, 3994-4002.	0.7	114
8	An experimental and kinetic modeling study of cyclohexane pyrolysis at low pressure. Combustion and Flame, 2012, 159, 2243-2253.	2.8	110
9	Quantification of the Keto-Hydroperoxide (HOOCH₂OCHO) and Other Elusive Intermediates during Low-Temperature Oxidation of Dimethyl Ether. Journal of Physical Chemistry A, 2016, 120, 7890-7901.	1.1	104
10	Additional chain-branching pathways in the low-temperature oxidation of branched alkanes. Combustion and Flame, 2016, 164, 386-396.	2.8	94
11	Experimental and modeling study of the effects of adding oxygenated fuels to premixed n-heptane flames. Combustion and Flame, 2012, 159, 2324-2335.	2.8	85
12	Kinetics of ethylcyclohexane pyrolysis and oxidation: An experimental and detailed kinetic modeling study. Combustion and Flame, 2015, 162, 2873-2892.	2.8	70
13	n-Heptane cool flame chemistry: Unraveling intermediate species measured in a stirred reactor and motored engine. Combustion and Flame, 2018, 187, 199-216.	2.8	68
14	Third O2 addition reactions promote the low-temperature auto-ignition of n-alkanes. Combustion and Flame, 2016, 165, 364-372.	2.8	66
15	Measuring hydroperoxide chain-branching agents during n-pentane low-temperature oxidation. Proceedings of the Combustion Institute, 2017, 36, 333-342.	2.4	66
16	Comparative experimental and modeling study of the low- to moderate-temperature oxidation chemistry of 2,5-dimethylfuran, 2-methylfuran, and furan. Combustion and Flame, 2017, 181, 251-269.	2.8	61
17	Experimental and modelling studies of the effects of methanol and ethanol addition on the laminar premixed low-pressure n-heptane/toluene flames. Combustion and Flame, 2013, 160, 1333-1344.	2.8	58
18	Study of the Low Temperature Oxidation of Propane. Journal of Physical Chemistry A, 2012, 116, 12214-12228.	1.1	57

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19	Determination of absolute photoionization cross-sections of oxygenated hydrocarbons. International Journal of Mass Spectrometry, 2010, 293, 28-33.	0.7	56
20	Experimental and modeling investigation on premixed ethylbenzene flames at low pressure. Proceedings of the Combustion Institute, 2011, 33, 617-624.	2.4	56
21	Determination of absolute photoionization crossâ€sections of alkanes and cycloâ€alkanes. Rapid Communications in Mass Spectrometry, 2010, 24, 1335-1342.	0.7	53
22	Modeling Ignition of a Heptane Isomer: Improved Thermodynamics, Reaction Pathways, Kinetics, and Rate Rule Optimizations for 2-Methylhexane. Journal of Physical Chemistry A, 2016, 120, 2201-2217.	1.1	53
23	Experimental and modeling study on pyrolysis of n-decane initiated by nitromethane. Combustion and Flame, 2016, 165, 246-258.	2.8	51
24	Products from the Oxidation of Linear Isomers of Hexene. Journal of Physical Chemistry A, 2014, 118, 673-683.	1.1	50
25	Polycyclic aromatic hydrocarbons in pyrolysis of gasoline surrogates (n-heptane/iso-octane/toluene). Proceedings of the Combustion Institute, 2019, 37, 993-1001.	2.4	50
26	Investigation on primary decomposition of ethylcyclohexane at atmospheric pressure. Proceedings of the Combustion Institute, 2015, 35, 367-375.	2.4	47
27	A comprehensive experimental and kinetic modeling study of 1- and 2-pentene. Combustion and Flame, 2021, 223, 166-180.	2.8	47
28	Comprehensive study of the low-temperature oxidation chemistry by synchrotron photoionization mass spectrometry and gas chromatography. Combustion and Flame, 2022, 236, 111797.	2.8	47
29	Heats of Formation of Medium-Sized Organic Compounds from Contemporary Electronic Structure Methods. Journal of Chemical Theory and Computation, 2017, 13, 3537-3560.	2.3	45
30	Small ester combustion chemistry: Computational kinetics and experimental study of methyl acetate and ethyl acetate. Proceedings of the Combustion Institute, 2019, 37, 419-428.	2.4	45
31	Kinetics of Decomposition and Isomerization of Methylcyclohexane: Starting Point for Studying Monoalkylated Cyclohexanes Combustion. Energy & Fuels, 2013, 27, 1679-1687.	2.5	44
32	Experimental Investigation of the Low Temperature Oxidation of the Five Isomers of Hexane. Journal of Physical Chemistry A, 2014, 118, 5573-5594.	1.1	44
33	Three-stage heat release in n-heptane auto-ignition. Proceedings of the Combustion Institute, 2019, 37, 485-492.	2.4	44
34	Chemical kinetic insights into the ignition dynamics of n-hexane. Combustion and Flame, 2018, 188, 28-40.	2.8	42
35	An experimental and kinetic modeling investigation on a rich premixed n-propylbenzene flame at low pressure. Proceedings of the Combustion Institute, 2013, 34, 1785-1793.	2.4	41
36	A comprehensive experimental and kinetic modeling study of n-propylbenzene combustion. Combustion and Flame, 2017, 186, 178-192.	2.8	40

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37	Methylcyclohexane pyrolysis and oxidation in a jet-stirred reactor. Proceedings of the Combustion Institute, 2019, 37, 409-417.	2.4	40
38	Glycerol carbonate as a fuel additive for a sustainable future. Sustainable Energy and Fuels, 2018, 2, 2171-2178.	2.5	38
39	Exploring gasoline oxidation chemistry in jet stirred reactors. Fuel, 2019, 236, 1282-1292.	3.4	38
40	Determination of absolute photoionization cross-sections of nitrogenous compounds. International Journal of Mass Spectrometry, 2011, 303, 137-146.	0.7	36
41	Experimental and kinetic modeling studies of low-pressure premixed laminar 2-methylfuran flames. Proceedings of the Combustion Institute, 2017, 36, 1295-1302.	2.4	36
42	New insights into the low-temperature oxidation of 2-methylhexane. Proceedings of the Combustion Institute, 2017, 36, 373-382.	2.4	36
43	An experimental and modeling study of ammonia oxidation in a jet stirred reactor. Combustion and Flame, 2022, 240, 112007.	2.8	35
44	Degradation of Carbonyl Hydroperoxides in the Atmosphere and in Combustion. Journal of the American Chemical Society, 2017, 139, 15821-15835.	6.6	34
45	Efficient alkane oxidation under combustion engine and atmospheric conditions. Communications Chemistry, 2021, 4, .	2.0	33
46	Experimental and kinetic modeling study of 1-hexene combustion at various pressures. Combustion and Flame, 2016, 173, 151-160.	2.8	32
47	Hydroperoxide Measurements During Low-Temperature Gas-Phase Oxidation of n-Heptane and n-Decane. Journal of Physical Chemistry A, 2017, 121, 1861-1876.	1.1	31
48	Exploring the negative temperature coefficient behavior of acetaldehyde based on detailed intermediate measurements in a jet-stirred reactor. Combustion and Flame, 2018, 192, 120-129.	2.8	31
49	Ion chemistry in premixed rich methane flames. Combustion and Flame, 2019, 202, 208-218.	2.8	30
50	Isomer-sensitive characterization of low temperature oxidation reaction products by coupling a jet-stirred reactor to an electron/ion coincidence spectrometer: case of n-pentane. Physical Chemistry Chemical Physics, 2020, 22, 1222-1241.	1.3	28
51	Jet-stirred reactor oxidation of alkane-rich FACE gasoline fuels. Proceedings of the Combustion Institute, 2017, 36, 517-524.	2.4	27
52	Hydrogen shift isomerizations in the kinetics of the second oxidation mechanism of alkane combustion. Reactions of the hydroperoxypentylperoxy OOQOOH radical. Combustion and Flame, 2018, 197, 88-101.	2.8	24
53	Multistructural Anharmonicity Controls the Radical Generation Process in Biofuel Combustion. Journal of the American Chemical Society, 2019, 141, 18531-18543.	6.6	22
54	Antiknock quality and ignition kinetics of 2-phenylethanol, a novel lignocellulosic octane booster. Proceedings of the Combustion Institute, 2017, 36, 3515-3522.	2.4	21

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55	Theoretical kinetic study of the formic acid catalyzed Criegee intermediate isomerization: multistructural anharmonicity and atmospheric implications. Physical Chemistry Chemical Physics, 2018, 20, 10806-10814.	1.3	21
56	Experimental and theoretical studies on decomposition of pyrrolidine. Proceedings of the Combustion Institute, 2011, 33, 415-423.	2.4	16
57	Chemistry deriving from OOQOOH radicals in alkane low-temperature oxidation: A first combined theoretical and electron-ion coincidence mass spectrometry study. Proceedings of the Combustion Institute, 2021, 38, 309-319.	2.4	16
58	Cool flame chemistry of diesel surrogate compounds: n-Decane, 2-methylnonane, 2,7-dimethyloctane, and n-butylcyclohexane. Combustion and Flame, 2020, 219, 384-392.	2.8	15
59	Exploring low temperature oxidation of 1-butene in jet-stirred reactors. Combustion and Flame, 2020, 222, 259-271.	2.8	15
60	Revisiting low temperature oxidation chemistry of n-heptane. Combustion and Flame, 2022, 242, 112177.	2.8	15
61	Relative Rates of Hydrogen Shift Isomerizations Depend Strongly on Multiple-Structure Anharmonicity. Journal of the American Chemical Society, 2018, 140, 17556-17570.	6.6	14
62	Improving quantification of hydrogen peroxide by synchrotron vacuum ultraviolet photoionization mass spectrometry. Combustion and Flame, 2022, 242, 112214.	2.8	14
63	Experimental and Chemical Kinetic Modeling Study of Dimethylcyclohexane Oxidation and Pyrolysis. Energy & Fuels, 2016, 30, 8648-8657.	2.5	13
64	A comprehensive combustion chemistry study of n-propylcyclohexane. Combustion and Flame, 2021, 233, 111576.	2.8	13
65	Jet-Stirred Reactor Study of Low-Temperature Neopentane Oxidation: A Combined Theoretical, Chromatographic, Mass Spectrometric, and PEPICO Analysis. Energy & Fuels, 2021, 35, 19689-19704.	2.5	12
66	An experimental and theoretical study of pyrrolidine pyrolysis at low pressure. Proceedings of the Combustion Institute, 2013, 34, 641-648.	2.4	9
67	Exploring low temperature oxidation of iso-octane under atmospheric pressure. Combustion and Flame, 2022, 243, 112019.	2.8	9
68	Conformational inversion-topomerization mechanism of ethylcyclohexyl isomers and its role in combustion kinetics. Proceedings of the Combustion Institute, 2017, 36, 237-244.	2.4	8
69	Conformation-dependent low-temperature oxidation chemistry of methylcyclohexane: First oxygen addition and chain-branching. Combustion and Flame, 2022, 243, 111963.	2.8	8
70	Probing pyrolysis chemistry of 1-heptene pyrolysis with insight into fuel molecular structure effects. Combustion and Flame, 2021, 227, 79-94.	2.8	7
71	Low-temperature oxidation chemistry of 2,4,4-trimethyl-1-pentene (diisobutylene) triggered by dimethyl ether (DME): A jet-stirred reactor oxidation and kinetic modeling investigation. Combustion and Flame, 2021, 234, 111629.	2.8	7
72	Variable pressure JSR study of low temperature oxidation chemistry of n-heptane by synchrotron photoionization mass spectrometry. Combustion and Flame, 2022, 240, 111946.	2.8	7

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73	Experimental and kinetic modeling studies of 2-acetylfuran pyrolysis at atmospheric pressure. Combustion and Flame, 2022, 236, 111824.	2.8	6
74	A decoupled modeling approach and experimental measurements for pyrolysis of C6-C10 saturated fatty acid methyl esters (FAMEs). Combustion and Flame, 2022, 243, 111955.	2.8	5
75	Experimental and kinetic model studies on the pyrolysis of 2-furfuryl alcohol at two reactors: Flow reactor and jet-stirred reactor. Combustion and Flame, 2022, 244, 112275.	2.8	5
76	Intramolecular CH₃-migration-controlled cation reactions in the VUV photochemistry of 2-methyl-3-buten-2-ol investigated by synchrotron photoionization mass spectrometry and theoretical calculations. Physical Chemistry Chemical Physics, 2021, 23, 10456-10467.	1.3	4
77	Reaction kinetics of phenylÂ+Âphenylacetylene at combustion-relevant intermediate temperatures. Combustion and Flame, 2022, 243, 112014.	2.8	4
78	Chemical kinetic study of triptane (2,2,3-trimethylbutane) as an anti-knock additive. Combustion and Flame, 2019, 210, 399-412.	2.8	3
79	Low temperature oxidation of toluene in an n-heptane/toluene mixture. Combustion and Flame, 2022, 242, 112200.	2.8	3
80	Predictive Combustion Kinetics of OH Radical Reactions with a C5 Unsaturated Alcohol: The Competitive H-Abstraction and OH-Addition Reactions of 2-Methyl-3-buten-2-ol. Journal of Physical Chemistry A, 2021, 125, 10451-10462.	1.1	2
81	A Theoretical Study on Cool Flame Oxidation as an Effective Way for Fuel Reforming: Emphasis on Ignition Characteristics and Chemical Analysis. Combustion Science and Technology, 0, , 1-17.	1.2	0