Olivier Herbinet

List of Publications by Year
in descending order

101 papers	7,399 citations	57758 44 h-index	54911 84 g-index
104 all docs	104 docs citations	104 times ranked	3044 citing authors

#	Article	IF	Citations
1	A comprehensive detailed chemical kinetic reaction mechanism for combustion of n-alkane hydrocarbons from n-octane to n-hexadecane. Combustion and Flame, 2009, 156, 181-199.	5.2	721
2	Detailed chemical kinetic oxidation mechanism for a biodiesel surrogate. Combustion and Flame, 2008, 154, 507-528.	5.2	399
3	Detailed chemical kinetic mechanism for the oxidation of biodiesel fuels blend surrogate. Combustion and Flame, 2010, 157, 893-908.	5.2	333
4	An updated experimental and kinetic modeling study of n-heptane oxidation. Combustion and Flame, 2016, 172, 116-135.	5.2	307
5	An experimental, theoretical and kinetic-modeling study of the gas-phase oxidation of ammonia. Reaction Chemistry and Engineering, 2020, 5, 696-711.	3.7	275
6	An experimental and modeling study of propene oxidation. Part 1: Speciation measurements in jet-stirred and flow reactors. Combustion and Flame, 2014, 161, 2765-2784.	5.2	251
7	Detailed chemical kinetic reaction mechanisms for soy and rapeseed biodiesel fuels. Combustion and Flame, 2011, 158, 742-755.	5.2	238
8	Combustion chemical kinetics of biodiesel and related compounds (methyl and ethyl esters): Experiments and modeling â€“ Advances and future refinements. Progress in Energy and Combustion Science, 2013, 39, 340-382.	31.2	183
9	Measurements of Laminar Flame Velocity for Components of Natural Gas. Energy & Fuels, 2011, 25, 3875-3884.	5.1	181
10	Experimental Confirmation of the Lowâ€Temperature Oxidation Scheme of Alkanes. Angewandte Chemie - International Edition, 2010, 49, 3169-3172.	13.8	180
11	Experimental and modeling investigation of the low-temperature oxidation of n-heptane. Combustion and Flame, 2012, 159, 3455-3471.	5.2	165
12	A comprehensive experimental and detailed chemical kinetic modelling study of 2,5-dimethylfuran pyrolysis and oxidation. Combustion and Flame, 2013, 160, 2291-2318.	5.2	143
13	Thermal decomposition of n-dodecane: Experiments and kinetic modeling. Journal of Analytical and Applied Pyrolysis, 2007, 78, 419-429.	5.5	138
14	Experimental and kinetic modeling study of extinction and ignition of methyl decanoate in laminar non-premixed flows. Proceedings of the Combustion Institute, 2009, 32, 1067-1074.	3.9	128
15	Modeling of the oxidation of methyl estersâ€"Validation for methyl hexanoate, methyl heptanoate, and methyl decanoate in a jet-stirred reactor. Combustion and Flame, 2010, 157, 2035-2050.	5.2	124
16	The sensitizing effects of NO2 and NO on methane low temperature oxidation in a jet stirred reactor. Proceedings of the Combustion Institute, 2019, 37, 667-675.	3.9	124
17	A high temperature and atmospheric pressure experimental and detailed chemical kinetic modelling study of 2-methyl furan oxidation. Proceedings of the Combustion Institute, 2013, 34, 225-232.	3.9	121
18	Exploring hydroperoxides in combustion: History, recent advances and perspectives. Progress in Energy and Combustion Science, 2019, 73, 132-181.	31.2	119

#	Article	IF	Citations
19	Detailed kinetic study of anisole pyrolysis and oxidation to understand tar formation during biomass combustion and gasification. Combustion and Flame, 2014, 161, 1474-1488.	5.2	118
20	Experimental study of the oxidation of large surrogates for diesel and biodiesel fuels. Combustion and Flame, 2009, 156, 2129-2144.	5.2	112
21	Towards cleaner combustion engines through groundbreaking detailed chemical kinetic models. Chemical Society Reviews, 2011, 40, 4762.	38.1	111
22	Detailed product analysis during the low temperature oxidation of n-butane. Physical Chemistry Chemical Physics, 2011, 13, 296-308.	2.8	108
23	Detailed chemical kinetic reaction mechanism for biodiesel components methyl stearate and methyl oleate. Proceedings of the Combustion Institute, 2011, 33, 383-389.	3.9	92
24	An experimental and modelling study of n-pentane oxidation in two jet-stirred reactors: The importance of pressure-dependent kinetics and new reaction pathways. Proceedings of the Combustion Institute, 2017, 36, 441-448.	3.9	92
25	Experimental and Modeling Investigation of the Low-Temperature Oxidation of Dimethyl Ether. Journal of Physical Chemistry A, 2015, 119, 7905-7923.	2.5	85
26	Primary Mechanism of the Thermal Decomposition of Tricyclodecane. Journal of Physical Chemistry A, 2006, 110, 11298-11314.	2.5	82
27	Experimental study of the oxidation of methyl oleate in a jet-stirred reactor. Combustion and Flame, 2010, 157, 1220-1229.	5.2	81
28	Progress in Understanding Lowâ€Temperature Organic Compound Oxidation Using a Jetâ€Stirred Reactor. International Journal of Chemical Kinetics, 2014, 46, 619-639.	1.6	80
29	Oxidation of methyl and ethyl butanoates. International Journal of Chemical Kinetics, 2010, 42, 226-252.	1.6	78
30	Experimental and modeling study of the pyrolysis and combustion of dimethoxymethane. Combustion and Flame, 2018, 190, 270-283.	5.2	78
31	Production of hydrogen by lignins fast pyrolysis. International Journal of Hydrogen Energy, 2006, 31, 2179-2192.	7.1	72
32	An experimental and modeling study of the low- and high-temperature oxidation of cyclohexane. Combustion and Flame, 2013, 160, 2319-2332.	5.2	71
33	Measuring hydroperoxide chain-branching agents during n-pentane low-temperature oxidation. Proceedings of the Combustion Institute, 2017, 36, 333-342.	3.9	66
34	Quantification of OH and HO ₂ radicals during the low-temperature oxidation of hydrocarbons by Fluorescence Assay by Gas Expansion technique. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20014-20017.	7.1	65
35	New experimental evidences about the formation and consumption of ketohydroperoxides. Proceedings of the Combustion Institute, 2011, 33, 325-331.	3.9	64
36	Modeling study of the low-temperature oxidation of large methyl esters from C11 to C19. Proceedings of the Combustion Institute, 2011, 33, 391-398.	3.9	63

#	Article	IF	Citations
37	Experimental and Kinetic Modeling Study of 2-Methyl-2-Butene: Allylic Hydrocarbon Kinetics. Journal of Physical Chemistry A, 2015, 119, 7462-7480.	2.5	62
38	Experimental and modeling study of the oxidation of n-butylbenzene. Combustion and Flame, 2012, 159, 1399-1416.	5.2	59
39	Study of the Low Temperature Oxidation of Propane. Journal of Physical Chemistry A, 2012, 116, 12214-12228.	2.5	57
40	Low-temperature gas-phase oxidation of diethyl ether: Fuel reactivity and fuel-specific products. Proceedings of the Combustion Institute, 2019, 37, 511-519.	3.9	52
41	Experimental and modeling study of the thermal decomposition of methyl decanoate. Combustion and Flame, 2011, 158, 1288-1300.	5.2	50
42	Products from the Oxidation of Linear Isomers of Hexene. Journal of Physical Chemistry A, 2014, 118, 673-683.	2.5	50
43	New experimental evidence and modeling study of the ethylbenzene oxidation. Proceedings of the Combustion Institute, 2013, 34, 325-333.	3.9	48
44	Measurements of flat-flame velocities of diethyl ether in air. Energy, 2012, 43, 140-145.	8.8	47
45	Ammoniaâ€“methane interaction in jet-stirred and flow reactors: An experimental and kinetic modeling study. Proceedings of the Combustion Institute, 2021, 38, 345-353.	3.9	47
46	Quantification of Hydrogen Peroxide during the Low-Temperature Oxidation of Alkanes. Journal of the American Chemical Society, 2012, 134, 11944-11947.	13.7	46
47	Detailed Product Analysis during Low- and Intermediate-Temperature Oxidation of Ethylcyclohexane. Journal of Physical Chemistry A, 2012, 116, 5100-5111.	2.5	44
48	Experimental Investigation of the Low Temperature Oxidation of the Five Isomers of Hexane. Journal of Physical Chemistry A, 2014, 118, 5573-5594.	2.5	44
49	Experimental and modeling study of burning velocities for alkyl aromatic components relevant to diesel fuels. Proceedings of the Combustion Institute, 2015, 35, 341-348.	3.9	43
50	On the use of ammonia as a fuel â€“ A perspective. Fuel Communications, 2022, 11, 100064.	5.2	43
51	Experimental and modeling study of the oxidation of n-butane in a jet stirred reactor using cw-CRDS measurements. Physical Chemistry Chemical Physics, 2013, 15, 19686.	2.8	42
52	Low temperature oxidation of benzene and toluene in mixture with n-decane. Proceedings of the Combustion Institute, 2013, 34, 297-305.	3.9	42
53	Experimental and modeling investigation of the effect of the unsaturation degree on the gas-phase oxidation of fatty acid methyl esters found in biodiesel fuels. Combustion and Flame, 2016, 164, 346-362.	5.2	42
54	Kinetic Study of the Pyrolysis and Oxidation of Guaiacol. Journal of Physical Chemistry A, 2018, 122, 7894-7909.	2.5	41

#	Article	IF	Citations
55	Methylcyclohexane pyrolysis and oxidation in a jet-stirred reactor. Proceedings of the Combustion Institute, 2019, 37, 409-417.	3.9	40
56	A model of tetrahydrofuran low-temperature oxidation based on theoretically calculated rate constants. Combustion and Flame, 2018, 191, 252-269.	5.2	36
57	The oxidation of large alkylbenzenes: An experimental and modeling study. Proceedings of the Combustion Institute, 2015, 35, 349-356.	3.9	34
58	Experimental Study of Tetrahydrofuran Oxidation and Ignition in Low-Temperature Conditions. Energy & Fuels, 2015, 29, 6118-6125.	5.1	33
59	Insights into nitromethane combustion from detailed kinetic modeling â€“ Pyrolysis experiments in jet-stirred and flow reactors. Fuel, 2020, 261, 116349.	6.4	32
60	Hydroperoxide Measurements During Low-Temperature Gas-Phase Oxidation of <i>n-</i>Heptane and <i>n-</i>Decane. Journal of Physical Chemistry A, 2017, 121, 1861-1876.	2.5	31
61	Revisiting 1-hexene low-temperature oxidation. Combustion and Flame, 2017, 181, 283-299.	5.2	29
62	Comparison study of the gas-phase oxidation of alkylbenzenes and alkylcyclohexanes. Chemical Engineering Science, 2015, 131, 49-62.	3.8	28
63	Isomer-sensitive characterization of low temperature oxidation reaction products by coupling a jet-stirred reactor to an electron/ion coincidence spectrometer: case of <i>n</i>-pentane. Physical Chemistry Chemical Physics, 2020, 22, 1222-1241.	2.8	28
64	A first evaluation of butanoic and pentanoic acid oxidation kinetics. Chemical Engineering Journal, 2019, 373, 973-984.	12.7	27
65	Jet-Stirred Reactors. Green Energy and Technology, 2013, , 183-210.	0.6	27
66	Detection of some stable species during the oxidation of methane by coupling a jet-stirred reactor (JSR) to cw-CRDS. Chemical Physics Letters, 2012, 534, 1-7.	2.6	26
67	Probing the low-temperature chemistry of di-n-butyl ether: Detection of previously unobserved intermediates. Combustion and Flame, 2019, 210, 9-24.	5.2	26
68	Pyrolysis and Combustion Chemistry of Pyrrole, a Reference Component for Bio-oil Surrogates: Jet-Stirred Reactor Experiments and Kinetic Modeling. Energy & Fuels, 2021, 35, 7265-7284.	5.1	26
69	Diethyl ether pyrolysis study in a jet-stirred reactor. Journal of Analytical and Applied Pyrolysis, 2016, 121, 173-176.	5.5	25
70	Understanding the reactivity of unsaturated alcohols: Experimental and kinetic modeling study of the pyrolysis and oxidation of 3-methyl-2-butenol and 3-methyl-3-butenol. Combustion and Flame, 2016, 171, 237-251.	5.2	24
71	Effects of Bath Gas and NO_{<i>x</i>} Addition on <i>n</i>-Pentane Low-Temperature Oxidation in a Jet-Stirred Reactor. Energy & Fuels, 2019, 33, 5655-5663.	5.1	24
72	Experimental and modeling study of benzaldehyde oxidation. Combustion and Flame, 2020, 211, 124-132.	5.2	24

#	Article	IF	Citations
73	Oscillatory Behavior in Methane Combustion: Influence of the Operating Parameters. Energy & Fuels, 2018, 32, 10088-10099.	5.1	22
74	An experimental and kinetic modelling study of n-C4C6 aldehydes oxidation in a jet-stirred reactor. Proceedings of the Combustion Institute, 2019, 37, 389-397.	3.9	21
75	First detection of a key intermediate in the oxidation of fuelâ€¯+â€¯NO systems: HONO. Chemical Physics Letters, 2019, 719, 22-26.	2.6	21
76	The role of chemistry in the oscillating combustion of hydrocarbons: An experimental and theoretical study. Chemical Engineering Journal, 2020, 385, 123401.	12.7	21
77	Mass spectra of cyclic ethers formed in the low-temperature oxidation of a series of n-alkanes. Fuel, 2011, 90, 528-535.	6.4	20
78	Combustion of <i>n</i>-C₃â€“C₆ Linear Alcohols: An Experimental and Kinetic Modeling Study. Part II: Speciation Measurements in a Jet-Stirred Reactor, Ignition Delay Time Measurements in a Rapid Compression Machine, Model Validation, and Kinetic Analysis. Energy & Fuels, 2020, 34, 14708-14725.	5.1	20
79	Study of the Formation of the First Aromatic Rings in the Pyrolysis of Cyclopentene. Journal of Physical Chemistry A, 2016, 120, 668-682.	2.5	19
80	Combustion of <i>n</i>-C₃â€“C₆ Linear Alcohols: An Experimental and Kinetic Modeling Study. Part I: Reaction Classes, Rate Rules, Model Lumping, and Validation. Energy & Fuels, 2020, 34, 14688-14707.	5.1	19
81	Experimental and kinetic modeling study of the pyrolysis and oxidation of 1,5-hexadiene: The reactivity of allylic radicals and their role in the formation of aromatics. Fuel, 2017, 208, 779-790.	6.4	17
82	The thermal decomposition of furfural: molecular chemistry unraveled. Proceedings of the Combustion Institute, 2019, 37, 445-452.	3.9	16
83	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.	3.9	16
84	A study of chlorobenzene pyrolysis. Proceedings of the Combustion Institute, 2019, 37, 399-407.	3.9	14
85	Jet-Stirred Reactor Study of Low-Temperature Neopentane Oxidation: A Combined Theoretical, Chromatographic, Mass Spectrometric, and PEPICO Analysis. Energy & Fuels, 2021, 35, 19689-19704.	5.1	12
86	A study of the low-temperature oxidation of a long chain aldehyde: n-hexanal. Proceedings of the Combustion Institute, 2017, 36, 365-372.	3.9	11
87	Experimental and kinetic modeling study of the pyrolysis and oxidation of diethylamine. Fuel, 2020, 275, 117744.	6.4	11
88	Elevated pressure low-temperature oxidation of linear five-heavy-atom fuels: diethyl ether, n-pentane, and their mixture. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1269-1293.	2.8	11
89	Experimental and modeling study of 1-octene jet-stirred reactor oxidation. Fuel, 2017, 207, 763-775.	6.4	10
90	Thermo-chemical engines: Unexploited high-potential energy converters. Energy Conversion and Management, 2021, 229, 113685.	9.2	10

#	Article	IF	Citations
91	Exploring low temperature oxidation of iso-octane under atmospheric pressure. Combustion and Flame, 2022, 243, 112019.	5.2	9
92	Thermal Decomposition of Norbornane (bicyclo[2.2.1]heptane) Dissolved in Benzene:Â Experimental Study and Mechanism Investigation. Energy & Fuels, 2007, 21, 1406-1414.	5.1	7
93	A study of thermal decomposition of bromoethane. Journal of Analytical and Applied Pyrolysis, 2018, 136, 199-207.	5.5	7
94	An experimental and modeling study of the oxidation of nâ€•heptane, ethylbenzene, and nâ€•butylbenzene in a jetâ€stirred reactor at pressures up to 10Âbar. International Journal of Chemical Kinetics, 2020, 52, 1006-1021.	1.6	7
95	Variable pressure JSR study of low temperature oxidation chemistry of n-heptane by synchrotron photoionization mass spectrometry. Combustion and Flame, 2022, 240, 111946.	5.2	7
96	First Study of the Pyrolysis of a Halogenated Ester: Methyl Chloroacetate. Industrial & Engineering Chemistry Research, 2019, 58, 9331-9338.	3.7	4
97	Detailed experimental and kinetic modeling study of 3â€carene pyrolysis. International Journal of Chemical Kinetics, 2020, 52, 785-795.	1.6	4
98	Possible use as biofuels of monoaromatic oxygenates produced by lignin catalytic conversion: A review. Catalysis Today, 2023, 408, 150-167.	4.4	4
99	Gasâ€Phase Oxidation of Methylâ€10â€undecenoate in a Jetâ€Stirred Reactor. International Journal of Chemical Kinetics, 2017, 49, 711-728.	1.6	3
100	Accounting for molecular flexibility in photoionization: case of <i>tert</i>-butyl hydroperoxide. Physical Chemistry Chemical Physics, 2022, 24, 10826-10837.	2.8	3
101	Laminar Flame Velocity of Components of Natural Gas. , 2011, , .		2